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H.R. 2112, THE NATIONAL ENVIRONMENTAL  
TRADE DEVELOPMENT ACT OF 1993

Y 4.M 53:103-19

ARING

H.R. 2112, The National Environment...  
FORE THE  
COMMITTEE ON ENVIRONMENT  
AND NATURAL RESOURCES  
OF THE

COMMITTEE ON  
MERCHANT MARINE AND FISHERIES  
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

ON

H.R. 2112

A BILL TO PROVIDE FOR THE DEVELOPMENT AND IM-  
PLEMENTATION OF A NATIONAL STRATEGY TO EN-  
COURAGE AND PROMOTE OPPORTUNITIES FOR THE  
UNITED STATES PRIVATE SECTOR TO PROVIDE ENVI-  
RONMENTALLY SOUND TECHNOLOGY (INCLUDING  
MARINE BIOTECHNOLOGY), GOODS, AND SERVICES TO  
THE GLOBAL MARKET, AND FOR OTHER PURPOSES.

MAY 25, 1993

Serial No. 103-19

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# H.R. 2112, THE NATIONAL ENVIRONMENTAL TRADE DEVELOPMENT ACT OF 1993

TUESDAY, MAY 25, 1993

HOUSE OF REPRESENTATIVES, SUBCOMMITTEE ON ENVIRON-  
MENT AND NATURAL RESOURCES, COMMITTEE ON MER-  
CHANT MARINE AND FISHERIES,

*Washington, DC.*

The Subcommittee met, pursuant to call, at 10:00 a.m., in room 1334, Longworth House Office Building, Hon. Gerry E. Studds [chairman of the Subcommittee] presiding.

Present: Representatives Studds, Pallone, Reed, Furse, Thompson, Ravenel, and Gilchrest.

Staff Present: Joan Bondareff, Senior Counsel; Lesli Gray, Research Assistant; Leigh Clayton, Legislative Clerk; Sue Waldron, Press; Jeffrey Pike, Staff Director; Will Stelle, Chief Counsel; Tom Melius, Minority Professional Staff; Laurel Bryant, Minority Professional Staff; Margherita Woods, Minority Clerk.

## OPENING STATEMENT OF THE HON. GERRY E. STUDDS, A U.S. REPRESENTATIVE FROM MASSACHUSETTS

Mr. STUDDS. The Subcommittee will come to order.

We hold our second hearing this morning on the establishment of a national program to promote the export of U.S.-made environmental technologies, goods and services.

Since our first hearing in February, at least two related things have occurred. First, Congresswoman Furse, several other Members, and I have introduced the bill which is the subject of today's hearing, H.R. 2112, the National Environmental Trade Development Act of 1993.

Second, the President announced in his Earth Day Address that Commerce Secretary Brown would be tasked with developing an interagency strategic plan not only to increase exports of U.S.-made environmental technologies but to improve the competitiveness of those technologies.

While an interagency strategic plan sounds positively frightening, the President and we do share the same goal—ensuring that the United States is poised to take advantage of the rapidly expanding global market for environmental technologies. This market is estimated at \$200 billion a year and may grow to \$500 billion by the end of this decade.

Helping U.S. companies meet the world's demand for environmentally sound technology will not only create many new good jobs

in the United States but will also help the nations of the world prevent and solve their environmental problems.

Briefly, our bill would establish a joint public-private Environmental Trade Promotion Council; set an April 30, 1994, deadline for the Council to develop a national strategy for increasing environmental exports; authorize a five-year program of matching funds for up to six regional environmental business and technology cooperation centers to provide hands-on export assistance to small and medium-sized environmental companies; establish a senior level Environmental Service Corps within the Peace Corps; and, authorize the establishment of environmental business centers in nations with promising envirotech markets.

My own State has been a hotbed of innovation and creation for the envirotech industry. I have had the singular good fortune to visit many of our "green" companies and I never fail to be struck by their ingenuity. While not exactly beating swords into plowshares or spears into pruning hooks they are turning wastepaper into recycled products and horseshoe crab blood into a medical test for toxins.

A number of these companies have joined forces to establish the Environmental Business Council of New England, a regional trade association, and we have their Chairman of the Board, Don Connors, with us again today.

I am also pleased to welcome, for his first appearance before the Subcommittee, Edmund Woollen, Vice President for Government Marketing of Raytheon, Inc., a Massachusetts company. Raytheon has been a leader in the development of electronics and aviation services for the Defense Department and is now turning its attention to civilian needs for environmental goods and services.

We have a panel of seven people this morning, and we are also expecting a visit in the middle of things from Congressman Kennedy, who is also an author of a similar bill in the House.

I am going to treat you as a single panel; and ask you each to make your initial presentation in the order in which you appear on the witness list. We are going to ask you to confine your oral presentation to no more than five minutes. Many of you have written statements which will appear in their entirety in the record. The light system there will give you a one-minute warning. When the yellow light goes on, you have a minute left and the red light means you are done.

The gentlewoman from Oregon.

#### **STATEMENT OF THE HON. ELIZABETH FURSE, A U.S. REPRESENTATIVE FROM OREGON**

Ms. FURSE. Thank you, Mr. Chairman. I am extremely pleased to have the opportunity to welcome the witnesses today and would like to convey a special welcome to Mr. Bill Snyder of the Oregon Environmental Technology Association.

I also want to thank you, Mr. Chairman, for generously allowing me to participate in the crafting of this legislation. This bill is aimed at developing the United States environmental technology industry and promoting that capability to foreign nations in need of such environmental goods and services.



I see this legislation as having no losers. All parties involved are winners. Private business that provides products and services to improve the environment would receive technical and marketing assistance. The expansion of these businesses will create new jobs in the United States while foreign nations who have discovered the need for sustainable use of resources will not need to reinvent the wheel in seeking solutions to environmental dilemmas. It will all be to the benefit of the global environment.

While the United States has some of the toughest environmental laws in the world, and some of the best environmental expertise in the world, we have not made a national concerted effort to market our American know-how. The United States has indeed lost its share of the global environmental technology market to nations that have been supporting and vigorously promoting their own environmental technology capabilities.

This bill endeavors to coordinate the policies and programs of all Federal agencies working toward the same national strategy. It will create a network to explore opportunities, provide businesses with information, and assistance toward their growth and successful competition in the international market.

It is clear we have not kept up with the changing environmental and business needs of this Nation and this world. The goals of this legislation provide a wonderful opportunity for a U.S. economic conversion to meet this growing global recognition of the economic value of natural resources.

It will lead to domestic growth through an increased United States share of the global market and will enhance the United States' role in exporting environmental technology, goods and services by helping small and medium-sized businesses find their way into the global market.

The environmental technology industry cannot only provide more jobs in Oregon, which certainly we need them, but all across the Nation, providing answers perhaps to the restoration of our salmon populations and to some of our forest dilemmas. We need to work together to establish a close partnership among industry, research institutes, and government agencies, to pool our efforts into a network to explore opportunities and provide assistance for industry growth and competition in the global economy.

I very much look forward to the comments and the recommendations from our witnesses so that this Committee can refine this legislation and come close to achieving our objectives and I want to thank you again, Mr. Chairman, for your help in developing this wonderful legislation.

Thank you.

Mr. STUDDS. Thank the gentlewoman.

The gentleman from South Carolina.

#### STATEMENT OF THE HON. ARTHUR RAVENEL, JR., A U.S. REPRESENTATIVE FROM SOUTH CAROLINA

Mr. RAVENEL. Thank you, Mr. Chairman. I have opening remarks here by Mr. Cunningham, which he has asked me to put into the record.

Mr. STUDDS. Without objection.

Mr. RAVENEL. And I would also like to comment that down there in Charleston, South Carolina, at the General Dynamics plant, they are building some giant, enormous egg shaped digesters which are being exported up to Boston, Massachusetts, which a good many of us down in South Carolina feel is, in fact, a foreign country, and I just want you to know I am enthusiastically in support of this legislation.

Mr. STUDDS. We have to import giant eggs from somewhere. I suppose South Carolina is as good a place as any.

[The statement of Mr. Cunningham follows:]

STATEMENT OF HON. RANDY "DUKE" CUNNINGHAM, A U.S. REPRESENTATIVE FROM CALIFORNIA

Mr. Chairman, I would like to thank you for having this hearing today regarding the sale of environmental technologies to the growing demand on the world market.

The accelerated development of environmental technology will promote significant economic opportunity for our companies here in the United States. Many of our U.S. technologies for the prevention, control, and cleanup of air, water, and ground pollution have proved superior to those developed in other countries. The export market for environmental products and services offers tremendous opportunities for American business. We in Congress have the ability and responsibility to help the U.S. environmental industry and its many employees compete more effectively in the industrial market.

The world market for environmental technology is currently \$300 billion annually and is expected to reach \$600 billion by the year 2000. Environmental exports will stimulate job development and boost our economy here in the United States. Hopefully, through hearings such as this we will be able to address the challenge and help U.S. companies perform competitively and seize a major share of this global opportunity.

It is clear to me that as we strive to enhance our own environmental capabilities, we also create the opportunity for other nations to seek to enhance their own environmental quality and upgrade their environmental technology. In so doing, we will create new opportunities for America to supply the rest of the world with state-of-the-art environmental technology at competitive prices.

The Environmental Trade Development Act of 1993 highlights the importance of the environmental sector and focuses Federal Government efforts on environmental export promotion. Through the establishment of a joint public and private Environmental Trade Promotion Council, we can develop a national strategy for increasing our environmental technology exports.

From a local perspective, Mr. Chairman, I would like to stress the importance of the cooperation between the United States and Mexico now and in the future, to attain high levels of environmental cooperation. In San Diego County, for example, we have a tremendous problem with the Tijuana River, which flows into the United States from Mexico. It is essentially an open sewer and although a new international treatment plant is under construction, it continues to pose a tremendous health and public safety hazard. The only way to solve this problem is through international cooperation.

In the same vein, San Diego County, and indeed all of southern California, has serious air pollution problems. While we in San Diego are moving to build transit, use cleaner fuels, increase emissions standards and testing, and so forth, these steps are lacking in Mexico. Air pollution from Mexico doesn't stop at the border, of course.

The significance of this bill is that American technologies exist to address both of these situations. We are the world leader in water treatment and controlling air pollution. This legislation can help American firms to get these technologies into Mexico, boosting exports and helping to improve the environment for Americans and Mexicans alike.

In closing, I would like to stress that the Federal Government, along with the private sector, is poised to make a significant contribution to the strengthening of the American economy and the enhancement of foreign environmental awareness through this very important piece of legislation.

I look forward to working on this and other important matters that this Committee will be working on in the future.

STATEMENT OF JACK FIELDS, A U.S. REPRESENTATIVE FROM TEXAS, AND RANKING  
MINORITY MEMBER, COMMITTEE ON MERCHANT MARINE AND FISHERIES

Mr. Chairman, I am pleased that the Subcommittee on Environment and Natural Resources is devoting time to this important issue of promoting trade in environmental technologies. Increased trade in such technologies is a win-win situation, improving the global environment and our Nation's economy. When we have such opportunities we must take advantage of them.

As someone who represents a city with the third largest port in the United States, I have a keen interest in trade matters. I believe it is important to encourage the private sector to develop environmental technologies and assist in exploring them to countries that are in need of our expertise.

I would like to commend the Chairman for his efforts in introducing H.R. 2112, the "National Environmental Trade Development Act of 1993". I support the goals of this bill, to develop competitive environmental products and expand markets for those products. Development of a national strategy for increasing environmental exports is long overdue. I am sure it is difficult for the private sector to deal with over a dozen different governmental entities and multiple programs and regulations. Consolidation and simplification in these areas is also needed.

However, I am hesitant to support the creation of additional bureaucracy that may or may not be necessary in this time of limited funds. We need to examine the current situation in the global marketplace and within current governmental agencies to answer questions such as:

—Are there trade barriers preventing the expansion of environmental technologies? If so, how do we eliminate them?

—What type of assistance will be most beneficial to these environmental industries? Is monetary help from the Government needed? If so, how much?

What kind of coordination is needed between the public and private sectors to expand exports?

I look forward to hearing the testimony offered today and hope that some of my questions can be answered. We have a unique opportunity here to provide jobs and improve the environment. I hope we can take advantage of it in an effective and efficient way.

Thank you, Mr. Chairman.

Mr. STUDDS. The Chair welcomes all those who have not been especially welcomed, and I guess that would be the witnesses that don't have the good sense to be either from Oregon, South Carolina, Massachusetts or Arkansas. You are all especially welcomed.

We have indicated to Congressman Kennedy we would allow him to give testimony when he does arrive and then we will invite him to remain here to ask questions.

We will begin with Mr. Sallet, Director of the Office of Policy and Strategic Planning, U.S. Department of Commerce.

Mr. Sallet, I understand that you yourself have to leave at a certain point, and please feel free whenever your schedule requires to do so. Welcome.

STATEMENT OF JONATHAN B. SALLET, DIRECTOR, OFFICE OF  
POLICY AND STRATEGIC PLANNING, U.S. DEPARTMENT OF  
COMMERCE

Mr. SALLET. Thank you, Mr. Chairman. For the record, since you made a point of it, I will tell you I grew up in Massachusetts and my family lives in your district.

Mr. STUDDS. In that case, you are warmly welcomed also.

Mr. SALLET. I am very pleased to testify this morning on your bill, Mr. Chairman. The purpose of H.R. 2112 is clear, to develop a national strategy to promote U.S. export of environmental products, services and technologies. It is clear and it is essential; essential if we are to create new jobs at home, and essential if we are to help other countries meet their environmental needs.

The importance of these goals is aptly demonstrated by the high priority the President has placed on developing such an initiative. In his Earth Day directives, as you have noted, Mr. Chairman, the President directed the Secretary of Commerce to chair an inter-agency effort that will develop an Administration strategy to promote environmental technology and environmental exports.

To put it simply, we share your enthusiasm and we look forward to joining with you to bring the message of environmental and economic growth to the American people and to people around the world. That message must go far and wide because the markets are in every sense of the word global.

Global demand is estimated to range within the next decade from \$300 billion to \$500 billion. We know the markets exist but we have to move quickly. For example, Mexico is a country where tremendous opportunities exist and many U.S. companies have already established a strong presence. Other nations in Latin America, such as Brazil and Chile, offer great potential as well. Mr. Chairman, these are markets that American businessmen and women are already involved in.

About a month ago I met with Mr. Connors and his group in Massachusetts to talk about their work toward this future. One of the people I met is a woman named Joan Gardner, president of a firm called Applied Geographics, Inc., a small geographics information systems firm. She told me about the tremendous opportunities that exist for companies such as hers in Latin America.

Recently, she signed a joint venture contract in Mexico City where her firm will locate and map the water and sewage lines in about a third of the city. This work is critical to the Mexican Government in its planning for water use and water conservation and, of course, it is a tremendous economic benefit to our economy here.

Similar possibilities exist around the world in Asia, the Newly Independent States, Europe and, of course, the EC. But we are not free from competition. Both Japan and Germany have concerted programs to capture these markets and that is why we need a national mission here. That is why the President in his Earth Day speech directed Secretary Brown to chair the work to increase exports of U.S. environmental technologies.

The Department of Commerce, we think, is ideally suited to this task. NOAA is a bastion of scientific research and environmental expertise. The International Trade Administration is charged with the responsibility of promoting exports around the world and NIST, and our technology centers, will play a key role in carrying out the President's program for the development of environmental technology. In other words, the Department of Commerce is the place where environment and exports and technology all come together.

And we are working in partnership with other parts of the Federal Government, including the Environmental Protection Agency, the Department of Energy and the Ex-Im Bank. Indeed, I am particularly pleased to be appearing here this morning with a representative of the EPA whose new administrator, Carol Browner, has already shown herself to be a dynamic and forceful leader on environmental issues.

The work we have begun is wholly consistent with the goals of your legislation. We have begun to meet already and we are now formulating a long-range strategic plan for environmental exports and technology. As we go forward, we hope to be able to consult with this Committee and with you, Mr. Chairman, and to continue to study the specific provisions of your legislation.

My written statement goes into more details on these points and discusses the legislation, but there is one specific word I would like to say about a prime focus of your bill, close consultation with industry.

We absolutely agree that industry must play an important role in developing an appropriate strategy here. Just yesterday, in his address at the National Press Club, Secretary Brown emphasized again the importance of achieving real economic growth by working very closely with businesses and the private sector.

In conclusion, Mr. Chairman, let me thank you again for the opportunity to share with you and members of your Committee my department's views on this legislation. We applaud your efforts to carry out the President's commitment to fostering the growth of U.S. environmental technology and exports. We are encouraged by your legislation because it sends exactly the right signal. We look forward to working closely with you to accomplish the Administration's goals to protect the environment and to promote long-term economic growth. Thank you.

Mr. STUDDS. Thank you very much, Mr. Sallet. Also exquisite timing. We appreciate that.

[The prepared statement of Mr. Sallet can be found at the end of the hearing.]

Mr. STUDDS. Next, Mr. Alan Hecht, Acting Assistant Administrator for International Activities, EPA. That is too many words, Mr. Hecht, Acting Assistant Administrator. Welcome.

Mr. HECHT. We could drop the first part.

Mr. STUDDS. I have no objection to that.

#### STATEMENT OF ALAN D. HECHT, ACTING ASSISTANT ADMINISTRATOR FOR INTERNATIONAL ACTIVITIES, ENVIRONMENTAL PROTECTION AGENCY

Mr. HECHT. Thank you, Mr. Chairman. I am not a resident of Massachusetts but I do enjoy vacationing in Massachusetts, Oregon, or South Carolina, or anywhere else.

Mr. STUDDS. Then you may proceed.

Mr. HECHT. My text has a number of points that I would like to just highlight and leave the reading of it aside.

I think your proposed legislation is extremely timely. There is no doubt that enormous new opportunities are emerging worldwide for environmental technology. From the perspective of EPA, we see the world as a series of opportunities arising from those countries that are now beginning to develop an environmental protection agency for the first time, and in that context will be writing legislation, adopting rules, and organizing their thinking along lines that gives us an opportunity really to influence them.

How they develop this structure will affect how they in the long run achieve their environmental protection. There is a link be-

tween these early developments of an agency that may be occurring, let's say, in parts of the former Soviet Union, to their eventual need for and use of environmental technology. So that at the one end around the world we have those kinds of opportunities, and at the other end we have opportunities in countries in Asia and elsewhere which have neglected environmental issues for a long time. They have accelerated their economic growth.

They have a vast amount of resources that have to be applied now to cleaner air, sewage, and waste, and they are looking to the United States, along with others, to fill those needs. In those areas of the world we are in competition with Japan, Germany, and many other countries that are fostering the kinds of technology that meet those needs.

So there is a continuum. Enormous opportunities around the world, and your legislation highlights, I think, what are some of the essential ingredients to attract those investments.

Let me just mention three. One is of course the need for an overall strategy. I think for some time it has been very clear that almost all agencies in the government are in some way involved in technology assistance or export promotion or export assistance and have seized opportunities as they have emerged. But as the competition grows from Japan and Germany and elsewhere, and as the opportunities emerge and as it has become clear that export promotion means more jobs and from our point of view, exporting U.S. philosophy about environment and exporting U.S. technology really addresses world problems, then the need for a more coherent strategy has also become quite evident.

One of the things I think this administration has developed and is pushing is real leadership in this area. We look forward to working with Secretary Brown. He has already convened a cabinet level meeting of the Trade Promotion Coordinating Committee to begin this process of developing a strategy. We began working with Commerce on a number of initiatives early on, one of which I would like to—I know you have a copy, but I would highlight that Commerce has in the past published what they have called the Yellow Pages. Sometime ago, we discussed with them the concept of applying it to a "Green Pages," an inventory of U.S. businesses that are involved in exports of environmental technology. Canada, U.K., Germany, Denmark have similar kinds of brochures, and I am happy to say just this past week, with OMB support, we now have a Green Pages available for the first time. And our goal—I think this first edition has only 1,000 companies—is by next year that this will grow to more than 3,000 companies.

So on strategy, we are in full agreement that that is the goal and that is what is needed and that strategy goes everywhere from building the capacity in countries, making them aware of the kinds of technologies that are needed, which is really where EPA has its strengths to the promotion of export and demonstration, where many other agencies have their strength, and we look to Commerce to provide leadership.

I think what is also emerging is that there are several approaches to doing this. It is clear that a partnership with industry and the private sector is essential and that includes ways in which to achieve that. We are exploring that now, and we have had discus-

sion with Mr. Connors and others, and I think new ideas are emerging about how we in our agency can bring our expertise and can help small and large businesses.

Another element of your legislation and another element that is emerging is the need for information, a clearinghouse and access, and I think we have done a lot to begin that and there is more that can be done.

Training and capacity building in your legislation is something also we have done, including the establishment of business centers. And while we have had some experience in Budapest and elsewhere on some business opportunities, business centers and environment centers, we are now working with Commerce and others in evaluating the need for further centers as part of the U.S.-Asia partnership program and as part of the NIS-Russia program.

So all in all, the elements of what you are proposing and the elements of this legislation capture, I think, what the spirit of this administration is trying to do with a new sense of leadership, from our point of view, as an agency that has a long record of activities on technology development and technology assistance. It is an opportunity for us to be part of a true U.S. integrated strategy. And I think that is what we need competitively and I think that is what we need to address, the environmental issues of the world today. Thank you, Mr. Chairman.

Mr. STUDDS. Thank you very much, Mr. Hecht.

[The prepared statement of Mr. Hecht can be found at the end of the hearing.]

Mr. STUDDS. Next, Mr. Don Connors, Chairman of the Board of Directors of the Environmental Business Council of New England, and, I think, Don, you are to grow and wax into a national organization.

#### **STATEMENT OF DONALD L. CONNORS, ESQ., CHAIRMAN, BOARD OF DIRECTORS, ENVIRONMENTAL BUSINESS COUNCIL, INC.**

Mr. CONNORS. Thank you, Mr. Chairman. Yes, the Environmental Business Council, with the encouragement and support of organizations throughout the country, has undertaken a responsibility to organize the Environmental Business Council of the United States. I serve as its President. We are launching the national association formally at a strategy/idea development meeting to be held in Washington in early June. We hope, Mr. Chairman, that your time and schedule will allow you to address our meeting.

We think it is critical to the implementation of an integrated United States strategy for connecting the environmental industry of the United States to service the needs of nations and individuals in the world, that it be accomplished through a collaboration between our Federal Government, the States having particular interest in the subject, and the private sector.

The private sector has demonstrated through the Environmental Business Council and my colleagues in Oregon, represented by Bill Snyder of the Oregon Environmental Technology Association, that environmental companies, with cooperation of our States and academic institutions, can connect the competence that exists in our environmental industry to market opportunities in other nations of



the world. It is through a partnership including the Federal Government, the States and the private sector that we will maximize the potential to bring this incredibly valuable and important resource, the United States environmental industry, to the service of the planetary environment and to the creation of many high paying jobs in our country.

It is an extraordinarily important time for us in the United States environmental industry. Mr. Chairman, we applaud you and your Committee, the Commerce Department, the Administration and EPA for the attention they are devoting to this important industry and its global market opportunity. Mr. Chairman, we will succeed in achieving our objective of improved export market development.

My written statement gives a detailed discussion of the proposed legislation. We, of course, support this legislation without qualification, and believe that its central themes having been endorsed by the Commerce Department and the Environmental Protection Agency are the elements that will lead to the success we expect to achieve.

There are elements of the legislation that I believe to be particularly important. Our experience in bringing environmental companies to business opportunities in Mexico illustrates the importance of local and regional, as well as national level export promotion through the proposed regional centers.

As you will recall, a group of our companies in the Environmental Business Council visited Mexico and as a result of extensive discussions we entered into an Agreement of Cooperation with the Confederation of Industries (CONCAMIN), the National Industrial Trade Association of Mexico. As a result of our agreement of technology cooperation, we have had many of our companies during the past fifteen months visit Mexico, engaging in one-on-one consultations on environmental management, or participating in environmental conferences and trade shows. As a result of these EBC-sponsored meetings, our companies have entered into an extraordinary number of new joint ventures and nearly one hundred million dollars of business has resulted from our firms..

We are bringing to the table the capacity and experience which our companies have to the companies in Mexico that have the capacity and the ability to use that competence and experience. Thereby, we are assisting Mexico, as we can other nations over time, in the development of an environmental industry that has the benefit of our experience and competence in environmental technology and services.

The regional environmental centers proposed in this legislation are important because small and medium-sized companies need to be connected to export development assistance at the regional as well as at the Washington level. The industry must have a strong uniform presence in Washington so that the government can communicate to the industry and the industry can in turn communicate with government.

A final point. The proposed legislation would establish the experienced environmental professional volunteer program within the Peace Corps. As you know, my son and daughter-in-law are Peace Corps volunteers stationed in Africa. They work in a village in



Kenya. They are very happy with their experience and recently extended their tour of duty. I have in mind as volunteers the special kind of people I have come to know in the environmental field during the past quarter of a century. Many environmental professionals have an extraordinary commitment to the environment and to an altruistic view of the service to the field.

It is these experienced environmental professionals that would serve in this program—I believe they would help improve capacity for environmental management in nations that is so critically needed. We think that there are numbers of such people in the United States who would be delighted to serve, not at the village level, but at the senior national, State, major enterprise level towards improving the capacity of public and private sectors to implement effective modern environmental and management systems.

Mr. Chairman, I hope with your support and your Committee's support this legislation will be adopted and become law.

Mr. STUDDS. Thank you. You can relax, the red light does not apply to constituents. Thank you, Don, very, very much.

[The prepared statement of Mr. Connors can be found at the end of the hearing.]

Mr. STUDDS. Next, Mr. William Snape speaking for the Defenders of Wildlife. Mr. Snape.

#### STATEMENT OF WILLIAM J. SNAPE, III, ASSOCIATE COUNSEL FOR WILDLIFE POLICY, DEFENDERS OF WILDLIFE

Mr. SNAPE. Thank you Mr. Chairman. I thank you for the opportunity to address the Subcommittee this morning and for the opportunity to support a bill that could simultaneously help the environment and create American jobs. Not a shabby combination.

The simple fact that a Defenders of Wildlife representative sits here today to brief the Subcommittee on environmental technical exports shows how far the dialog on trade and the environment has come. No longer can we look at these two disciplines separately. Their connection is inextricable whether we are talking about CITES, tuna/dolphins in the Pacific Ocean or NAFTA trade sanctions for lax domestic enforcement of environmental laws. Because the interconnection between trade and the environment is so crucial and so deep, it is vital that the Federal Government develop short-term and long-term strategic plans to deal with the myriad of issues that arise from this connection.

The bill at issue today, H.R. 2112, is an important cog in the trade/environment wheel. If the U.S. is to ever develop a coherent policy on trade and the environment, there will need to be the same type of public-private cooperation and communication mechanisms that exist in H.R. 2112.

As you know, Mr. Chairman, Defenders' interest in environmental exports was piqued by the policy opportunity to link such exports with enforcement regimes being discussed in the NAFTA because, very often, the underlying cause for noncompliance with environmental standards, particularly in countries like Mexico, is technological incapacity or management deficiency. We decided to propose a consultative mechanism that could identify technical in-

ability and then charge a public-private task force with crafting result-oriented solutions.

Under our plan, if the noncomplying industry or sector in question did not abide by the task force's recommendations, its government would be subject to possible trade sanctions. With this mechanism, we hoped to create a lucrative carrot and a powerful stick. A copy of the original Defenders'—Environmental Business Council proposal is attached to my written testimony.

Unfortunately, USTR has not yet formally incorporated the technical cooperative approach in its proposed NAFTA enforcement regime. In order to accommodate the most recent U.S. NACE proposal, I have modified the original Defenders' EBC proposal. A full explanation of the modified plan is in my written testimony, although the overall thrust of the plan has not changed since its inception.

Furthermore, with the administration's goal of concluding the Uruguay Round of GATT and with a possible GATT "Green" round subsequently, there will be the possibility to link environmental exports to global trade. There is a strong movement to more fully reflect environmental costs in world trading rules. For example, nonenforcement of the environmental laws, or the lack of sound laws themselves, could be classified as either subsidies or dumping under GATT and trigger retaliatory trade measures.

Given my comments so far, it is obvious that a USTR seat at the proposed Environmental Trade Promotion Council seems necessary given that agency's involvement in developing trade policy and negotiating trade treaties. I would also recommend that the Department of the Interior, because of its expertise in conservation services, and the Department of Treasury, because of its multilateral developing bank lending authority, be added to the Council. In addition, the Office of Management and Budget should be asked to revise the standard industrial codes to expressly provide for tracking sales in environmental technologies.

We still do not really have firm export numbers in the area of environmental exports, although the green book Mr. Hecht identified is certainly a good start. A 1997 target date for a new SIC manual has already been established but the Subcommittee might want to consider an earlier date.

In conclusion, Mr. Chairman, although the politics of trade agreements often cloud the substantive gains made possible by them, I do truly believe momentous change is gripping the way the United States looks at its international trading relationships. While we should acknowledge liberalized trade can benefit sustainable and prosperous development, we cannot allow the mantra of free trade to trump all other values. On this ever shrinking planet we must not threaten the precious natural resources we have all inherited. H.R. 2112 is a very positive step in that direction.

Thank you, Mr. Chairman.

Mr. STUDDS. Thank you very much.

[The prepared statement of Mr. Snape can be found at the end of the hearing.]

Mr. STUDDS. Next Mr. Edmund Woollen, speaking for the Raytheon Company. Mr. Woollen.

**STATEMENT OF EDMUND B. WOOLLEN, VICE PRESIDENT,  
MARKETING, RAYTHEON COMPANY**

Mr. WOOLLEN. I might add I was schooled in the Northwest in oceanography; I live in the Northeast and was born in the Carolinas and I lived in Europe.

I want to thank you very much for inviting me as big business to be here with your Committee. Many people associate Raytheon with Patriot missiles and not green products. But we also have other products in it as well.

I want to speak to the National Environmental Trade Development Act of 1993. My name is Ed Woollen. My purpose in a \$9 billion, 63,000 employee company is business development.

Just to give you a quick background of what we do, we are in four major business areas: First, we are a leader in international and domestic electronic systems for the military, but also air traffic control and environmental sensing and surveillance.

Secondly, we are a leader in energy efficient home appliances. We do happen to have a plant facility in South Carolina. We feature the Amana, the Caloric, and the Speed Queen brands, and it is crucial to us in the environmentally friendly world to be sure we have not only an energy efficient plant but also energy efficient appliances.

We also design and we build aircraft under the Beechcraft name, including turbo props and corporate jets for delivery around the world. Again, energy efficiency is going to be key in those kinds of products. So environmental friendliness goes beyond cleaning up. It also means zero or reduced emissions, if you can, from the beginning.

And finally, most importantly, we also construct and modify large plants and facilities for the petrochemical industry, the chemical industry, power, steel, biotech and food processing. If we do it wrong, we put toxics into the water or into the air. So our objective on plants is to be environmentally conscious up front, around the world. If we can deliver an environmental friendly plant with an objective of zero toxic emissions, then there is less to worry about downstream. In fact, what we are finding is the ability to have very low wastewater and very low air pollutant contaminants coming from the plant becomes a value-added selling point around the world.

We need the assistance from the United States Government when we compete in Europe and other parts of the world for, let's say, a steel or a power plant. We would like that their rules and restrictions on environmental quality be similar to what we face in the United States. If we look, for example, at air pollution in Asia, which is going up very rapidly, we seek your assistance in educating China on the benefits of cutting air emissions. Once we do that, we become a competitor for clean power and clean air.

Just as a background, we export to more than 30 countries. Significantly, we visit more than 50 countries routinely in a given year and about one-fifth of our \$9 million is in sales from export products.

From our experience in the international marketplace, particularly in attempting to sell environmentally related products and

services, we know there is a great demand for environmental consultation and for new products aimed at cleaning up past environmental sins that will minimize the future human impact on Planet Earth.

We will also tell you selling environmental products is hard work because too many in this world still believe environmental improvements are a cost, not a benefit. That is where the educational parts of this legislation and U.S. Government leadership are crucial to the equation of foreign sale.

We know from our experience and our fellow big and small companies that we have the technology, the resources, and the organizational leadership in the United States to lead the world movement to environmentally sustainable urban and industrial development. Moreover, these capabilities have worldwide market value. They are good for business. When we export those capabilities, we create a very positive balance of trade and we also create very high skilled high wage jobs here at home.

We see the National Environmental Trade Development Act as a great benefit to industry. I will give you some reasons: First, it recognizes and supports opportunities to increase growth; secondly, it helps the small industry learn the international ropes, and I will tell you it is not easy to learn how to sell international business, so we support the business centers around this country, most importantly, but also in foreign countries.

We also very strongly support the Department of Commerce's leadership in this area, and I will put a plug in for the electronic bulletin board of the Department of Commerce. I looked at it this morning and picked off seven or eight environmental opportunities from this morning's data base.

I also support the bill's educational assistance role, and the idea of an Environmental Service Corps in the Peace Corps is magnificent at the regional and national level in developing countries to educate them on the balance between environmental growth and sustainable development.

Finally, in the spirit of making this legislation even more effective, I would offer two suggestions: One is let big business participate; and then secondly, let us have sites where we could do technology demonstrations in the United States to show our wares and products to our foreign friends when they come over.

Thank you very much, Mr. Chairman, for the opportunity to present our views.

Mr. STUDDS. Thank you very much, sir. I was hoping you might tell us about your experience in the Amazon but we will wait.

Mr. WOOLLEN. I will come back to that.

[The prepared statement of Mr. Woollen can be found at the end of the hearing.]

Mr. STUDDS. Congressman Kennedy, would you like to chip in now or wait and listen?

Mr. KENNEDY. If it is not an inconvenience, I will chip in now.

Mr. STUDDS. You are making the Republican side extremely nervous, but we will be pleased to recognize you.

STATEMENT OF THE HON. JOSEPH P. KENNEDY, II, A U.S.  
REPRESENTATIVE FROM MASSACHUSETTS

Mr. KENNEDY. First of all, let me thank Chairman Studds and congratulate you, Mr. Chairman, on the tremendous work that you have done on this issue. I think that the opportunity for the United States to make serious advancements in terms of good jobs for the ordinary citizens of our country are really best put forward in the kind of environmental technologies that you have advocated so strongly for.

I also want to congratulate Ms. Furse on her efforts in this regard. I think she is developing a reputation here in the Congress for someone who has taken a strong lead and a very aggressive stance toward looking out for the people of this country. So I want to thank both of you and I want to thank our Republican Member for his efforts and I am sure we can count on his support when we need it for this bill.

First of all, let me just say that we hear an awful lot of talk these days as we move around the country about how the number one priority of America ought to be to look out for the jobs of the American people. But too often I think when we hear talk about the fact that the United States seems to be unable to compete effectively internationally, we hear the notion to the American people is that if we are going to compete internationally, it means we will have to compete with Mexicans, with the South Americans, with the southeast Asians, essentially for Third World jobs rather than going out after the jobs that the Germans and the Japanese and other highly developed industrial societies are looking out for their people.

What happens, of course, is that we get bogged down in the debate here in the United States as to whether or not we want to have an industrial policy, and as a result of that, what we say is, look, we have to let the marketplace set the tone of the debate. They will set in and of themselves the investment strategy and every-in American capitalism, you know, the future will take care of itself based on the investment of the dollar.

But the reality is that those are not the rules the rest of the country and the rest of the world are playing by. That is why the Germans have the Bundesbank and the Japanese a similar entity that makes specific investments in specific industries and favors those industries, and why the United States, despite the fact that we already provide billions of dollars' worth of investment in research and development, because there is no coordinated strategy between the R&D piece and the actual manufacturing jobs, what ends up occurring is we lose market share and we lose our technological breakthroughs because other companies from around the world say, hey, look, here are those innovative American companies, they have the invention, let's go out and buy them. So we end up losing on both scores.

We subsidize U.S. companies with our research and development through our university structure, which is a very sophisticated and highly important element of our economy, but then we don't convert that into jobs for the American people who are, after all,

paying the taxes that end up being utilized for the R&D to begin with.

So from the American worker's perspective, what we end up doing in this bizarre fashion of ours is subsidizing in a funny way the scientific breakthroughs that then countries around the rest of the world use to build a manufacturing base. So if you look at where the United States has gotten, it is a little bit mixed up. And where the real opportunities for economic growth are for in the future, there is one siren song that is just singing a big loud tune out there and that is environmental technologies.

It is a field that has, it is currently, as I understand, it is about \$200 billion, although I think that might be a little high. There are opportunities in most guesstimates for growth of up to \$500 billion in the next 10 years.

Now, the United States is either going to sit on the sidelines while those jobs go to other countries, while our technological breakthroughs are gobbled up by other companies, or we are going to realize that if we want to create a good, solid manufacturing base into the future, we have to have the businesses of our country incentivised to make those investments.

They are long-term investments. They require in some cases some government subsidy, but most importantly, they also require the Federal Government to be involved in the export of these technologies overseas.

I see many of the witnesses that you have before your Committee this morning are from some of our best and finest companies, some of whom have been involved in the defense industry. We push them very hard to say that they should be able to come up with a conversion program. Well, if there was ever a conversion program that cried out for the kind of technology and for the kind of innovative and creative workmanship that is contained within our defense industry, it is environmental technology.

So what I believe is that we need to come up with a two-pronged approach, one of which I think you have done a very good job of in the legislation, which you and Congresswoman Furse and others have filed, which is to create the atmosphere within America to have environmental technologies be viewed by the American public as something well worthwhile spending a few tax dollars on that can enable us to go out and create the good high-tech and high wage jobs that can be made available to the American people.

I believe, Mr. Chairman, that this legislation will also require a companion effort that deals with the Export-Import Bank, and the need for the Ex-Im Bank to be involved with a program specifically designed for environmental technologies that will allow that bank to provide the guarantees so that American businesses view their investment as having a concrete market that they can then export into.

We cannot hope to rebuild America's economy based only on domestic sales. We have to begin to export into this wonderful worldwide marketplace where we already have the technology, and what we need to now do is go into the manufacturing phase of the business plant and go from that manufacturing phase into real exports.

I spent 10 years in the international business arena before I came to the Congress, and I was always dumbfounded by the fact

that on almost every international flight I took, there was never an American businessman. I would find Germans and Japanese and all sorts of other people but no Americans.

Now, if we are serious about cleaning up the world, this is a wonderful opportunity to mesh the interest of government and business in a new world order that will allow, I think, American businesses to enjoy some of the investment that the taxpayer has already made in the system, and to do it without I hope the kind of diversion as to whether or not this is some kind of communist or socialist plot that will take away from our purest capitalist tendencies.

I think it is important that you have these hearings to demonstrate that some of America's strongest and finest and most prestigious businesses understand what is at stake here, that we also recognize that it is not just the biggest businesses, that there are a whole slew of small businesses throughout our country that have in them the best brains of America, that have the innovation and creativity that is necessary in order for America to make that leap-frog into the 21st Century, and we need to be looking out for those small businesses as well as the large ones.

But, Mr. Chairman, I really wanted to again thank you very much for the opportunity to testify before your Committee and I want to pledge to work with you in seeing that our Nation really has an opportunity to capture this market in the future. And I think that you have done a tremendous job at making certain that this field, which is probably, as I mentioned, the best opportunity for America to gain an important market share to demonstrate the kind of technological breakthroughs that are available and to do so by creating good jobs for the American people. I want to pledge to working with you on these issues in the future.

[The prepared statement of Mr. Kennedy follows:]

STATEMENT OF HON. JOSEPH. KENNEDY, II, A U.S. REPRESENTATIVE FROM  
MASSACHUSETTS

First of all, I would like to thank Chairman Gerry Studds, ranking member Jim Saxton, and other members of the Subcommittee for bringing this legislation before the Subcommittee today. In particular, I would like to commend Chairman Studds and Congresswoman Elizabeth Furse for their leadership in the area of environmental technologies—so critical to our Nation's environmental and economic well being. I am pleased to have the opportunity to present testimony in support of the National Environmental Trade Development Act of 1993.

Chairman Studds has a proven record as a national environmental leader, advocating the promotion and protection of our environment in areas ranging from clean water to endangered species. As a Member of the Massachusetts delegation, I know he has worked tirelessly to promote the environmental protection and well-being of natural resources for the State of Massachusetts and for the nation as a whole. I would also like to thank the expert witnesses for presenting testimony today—they represent today's industries which hold the key to the future. In particular, I am pleased that the New England Environmental Business Council and Raytheon are represented here today.

The need for this legislation is clear. The bill allows us to do well by doing good. Without question, trade and the environment go hand-in-hand. Increasingly, our nation will rely on its innovations in this area to spur our international competitiveness. The United States remains a world leader in the development of environmental technologies, but we are up against stiff international competition. Unlike our trade competitors, including Japan and Germany, the United States has yet to develop a coherent strategy for promoting environmentally critical technologies.

The political tides are changing. President Clinton's Earth Day address is indicative of the Administration's commitment to advancing the nation's global role in en-



vironmental technologies. The National Trade Development Act of 1993 sets forth a strategic plan to move our nation and its environmental industries toward that goal.

At last year's United Nations Conference on Environment and Development in Rio, the United States and the international community adopted "Agenda 21." "Agenda 21" calls on all nations to implement strategies for sustainable development of their natural resources and urges nations to cooperate on environmentally sound technologies with developing countries.

The case is pressing for the newly independent States of Eastern Europe and the former Soviet Union. They will require environmental technologies to address many years of environmental neglect.

Ultimately, these technologies are good for the environment and good for the pocketbook. The global market for environmental technologies is now \$200 billion per year and is expected to reach \$500 billion in the next decade. Our ability to compete in this marketplace will translate into hundreds of thousands of new jobs for Americans. Significant prospects exist for the U.S. defense industry to maximize opportunities for defense conversion into this dynamic area of economic growth.

There are several parts of the bill, where I would like to lend my particular support. This legislation mobilizes the strengths of the Peace Corps, which have been so important to me and my family, to get the environmental word out on an international level. The notion of Americans going to other countries to help with environmental problems toward sustainable development practices is a great next step. A new Environmental Service Corps within the Peace Corps will do just this.

In particular, I am pleased that the bill incorporates a focus on marine biotechnology. The development of these marine-related technologies will serve to address serious water quality conditions worldwide, including some of our nation's own troubled coastal areas like the Boston Harbor and the Chesapeake Bay.

Numerous studies have shown that small businesses are true leaders in innovation and productivity. Yet, these are the same businesses which experience difficulty in establishing themselves in the international marketplace. This bill will get critical information out to the business community through six Regional Environmental Business and Technology Cooperation Centers, which will serve as a training ground for export-minded small and medium-sized environmental businesses.

But small businesses need more than technical information on export opportunities, they need financial support to market their services and products abroad. That is why I introduced H.R. 2096, which will enhance export opportunities for environmental technologies through the Export-Import Bank. This bill, which I introduced on behalf of Chairman Studds and myself, has two areas of focus. First, it will create a \$500 million fund in the Export-Import Bank to finance the export of U.S. environmental services and technologies. Second, it will apply existing environmental impact criteria to more Export-Import Bank activities—extending application to all projects requesting medium- or long-term support of \$7 million from the Bank.

In addition to a strategy for exporting these environmental technologies, we need a strategy to better coordinate and enhance our domestic efforts to develop them. Several such initiatives are currently before Congress, including legislation which I have introduced, H.R. 2224, the Office of National Environmental Technologies Act. Together, these initiatives will put in place a comprehensive Federal framework for the development, commercialization, and export of green technologies.

Environmental technology policy is part and parcel to our nation's industrial policy and economic well-being. It's time to take actions to make this a reality. This legislation will go a long way toward reasserting the U.S. role as an environmental leader with the export of environmental technologies abroad. I look forward to working with the Chairman and other members of the Subcommittee to this end. Thank you.

**Mr. STUDDS.** We thank you very much. We are looking forward to doing that. I think, between us, we are two-thirds of the way there. You get H.R. 2096 out of Banking Committee, we will talk to Mr. Gejdenson, in whose Subcommittee on Foreign Affairs it resides, and the Chairman of the Rules Committee I think will look kindly on the endeavor.

**Mr. KENNEDY.** If we cannot deliver him, then we should hang it up. I think that if my job is to go get the Banking Committee, if you would not mind excusing me.

**Mr. STUDDS.** We are going to have to conclude the hearing prior to marking up and reporting the bill, however, I appreciate the in-



fusion of vigor on the Minority side over here. Are you sure you have to leave?

Mr. KENNEDY. I do, Mr. Chairman. I am sorry.

Mr. STUDDS. Thank you very, very much.

Next, Mr. Schofield, representing Thermatrix, Inc. Am I pronouncing your company correctly, Mr. Schofield?

Mr. SCHOFIELD. Yes, sir.

**STATEMENT OF JOHN T. SCHOFIELD, PRESIDENT AND CEO,  
THERMATRIX, INC.**

Mr. SCHOFIELD. Thank you, Mr. Chairman, and members of the Subcommittee for inviting me as an environmental technology developer, and as a representative of the Environmental Equipment Manufacturers' Association to participate in the hearing on the National Environmental Trade Development Act of 1993.

It is my strong belief that unless action is taken to organize a concerted effort between private industry and government in the commercialization and application of environmental technology, the United States will continue on its existing path of being a developer and exporter of environmental technology rather than a manufacturer and exporter of environmental equipment and products.

The proposal outlined in H.R. 2112 will set in motion the strategy to redirect the current focus with the resulting creation of a significant number of engineering and manufacturing jobs in the United States. At the same time, the significant added value of exporting equipment rather than technology can play a major role in reducing the current trade deficit.

I am President and CEO of Thermatrix, Inc., a small private company based in San Jose, California, but predominantly financed by venture capital companies in Boston, Massachusetts.

After 12 years of research and development and the expenditure of some \$33 million in funds from various sources, the company entered the commercialization phase of its technology in May of 1992. The technology, which is a replacement for incineration, has had a unique acceptance in the marketplace, but in order for the company to survive while it builds and demonstrates its first units, significant additional financing is required. Many tempting offers have been received from overseas to sell the company or license the technology during this period.

The initial commercial introduction of the technology has been in air pollution control, dealing with the destruction of hazardous air pollution from vent streams, the current solution to which has been the use of fume incinerators or flares. As such, the company competes in this air pollution control market segment, one of the fastest growing segments of the environmental business, currently projected in the United States at a market size of \$5.3 billion per year and growing at the rate of 25 percent per year.

This market segment, which is projected to be the fastest growing segment on a global basis has attracted foreign interest to the United States which has taken the leadership in the development of new environmental technologies. As a result, today, over 70 percent of air pollution control technologies employed in the United

States are controlled by foreign firms and interests and the current acquisition focus by these foreign entities is extremely active, a fact to which I can personally attest.

It is clear that the same foreign interests which are acquiring these technologies do not intend to manufacture equipment embracing these technologies in the United States for export overseas. Rather, their intent is to gain a dominant share of the United States market with these technologies and also take the technology overseas for incorporation into manufacturing in those other countries including Europe and the Far East.

This fact is at the crux of the misunderstanding that exists concerning the global marketplace for environmental technology. While the total marketplace is huge and is expected to grow to \$300 billion by the year 2000, the ability for the United States to participate in this growth and create jobs within the United States will only be achieved if the technology is incorporated into equipment here and that equipment is exported from the United States rather than the export of technology.

Exporting environmental technologies either by licensing or by the sale of small technology development companies also results in exporting engineering and manufacturing jobs which will never return to the United States.

After years of adversarial relations, government and industry are beginning to recognize that they must cooperate to meet their different goals. As the government is forced to comply in its Federal facilities with the same regulations and permitting procedures faced by the private sector, there is a new appreciation of the difficulties facing the private sector in the commercialization and application of new environmental technologies.

A solution to date has been to spend yet more money in research and development of new environmental technologies particularly through the increased use of Federal programs with the DOE and the DOD and through the use of tremendous resources existing in the national laboratories. While this is commendable, it will not address the real issue as to why it is that companies and Federal facilities are forced to deploy foreign technologies to solve their environmental problems. The fact is, the technologies they are using in many cases were originally developed in the United States but now have foreign ownership.

The continued priming of the research and development pump for environmental technology without resolving the problem as to why these technologies are not retained in U.S. ownership is an ineffective use of government and private funds in furthering job creation and export potential. My experience in the environmental manufacturing area would suggest at least nine engineering and manufacturing jobs are created for every one in research and development. Government and private industry need to cooperate and focus attention on solving the problems associated with the commercialization of environmental technologies domestically so that the growth which occurs in the application of the technology provides jobs and exports here in the United States.

Although considerable funds are available for research and development, virtually no government funding is available for the commercialization of environmental technology. Similarly, venture

capital firms will invest in research and development but in many cases see the maximum value of their investment materialize just prior to the commercialization phase which leads to a sale of all licensing of technology and equipment. The reason this is so is due to the absence of a clearly defined program for the certification of environmental technology equipment. The absence of such a program makes it difficult to sell technology and equipment with a guarantee of its permitting acceptance.

The foreign investor sees the situation somewhat differently in that he is able to purchase an environmental technology for a fraction of the dollars expended in research and development and can take that technology back to his own country and subsequently re-export to the United States.

Thank you, Mr. Chairman.

Mr. STUDDS. Thank you very much, sir.

[The prepared statement of Mr. Schofield can be found at the end of the hearing.]

Mr. STUDDS. Finally, Mr. William Snyder, Executive Director of the Oregon Environmental Association. Mr. Snyder, welcome.

#### **STATEMENT OF WILLIAM H. SNYDER, JR., EXECUTIVE DIRECTOR, OREGON ENVIRONMENTAL TECHNOLOGY ASSOCIATION**

Mr. SNYDER. Thank you, Mr. Chairman. I would like to thank you, Chairman Studds, Congresswoman Furse, and other members of the Committee for your timely and necessary legislation to support the United States enviro-tech industry.

I would also like to make special acknowledgment to Don Connors for his leadership on a national level. Don first came to speak to our association in December of last year at our first annual conference and spawned the idea, at least in the Northwest, of the need for a national industry association, which our organization also supports.

Last month Congresswoman Furse invited several members of the Oregon environmental industry to meet with her and her staff to look at an earlier version and discuss an earlier version of this legislation. It was a very fruitful meeting, and I would like to acknowledge Congresswoman Furse again for seeing that some of those suggestions were included in the current draft of the bill.

The Oregon Environmental Technology Association is a private nonprofit industry organization formed in 1991 to increase public and governmental awareness about the industry and the unparalleled economic opportunity our industry provides.

OETA aims to increase the visibility of the industry in international markets, develop linkages and build alliances regionally and nationally and form partnerships with government to realize the opportunities presented in the rapidly expanding global marketplace for environmental goods and services.

OETA is committed to supporting companies, identify and access markets, develop and provide effective, responsible environmental management, products, services and technology that enhance business and economic objectives. OETA is actively collaborating with academic and research institutions, State and Federal Governmen-

tal agencies, the Washington Environmental Industry Association, and the Pacific Northwest Economic Region in pursuing our goals.

Last week, our association president, Charles Dallas, attended a meeting of Northwest PETE, a partnership for environmental training and education based on a similar model, Southwest PETE, bringing together community colleges and universities, addressing the academic and training needs to support this industry's growth and development.

Former to 1989, the Pacific Northwest Economic Region includes the States of Oregon, Washington, Idaho, Montana, and Alaska and has as a primary objective the establishment of the region's environmental industry as a primary supplier of environmental goods and services to the world.

OETA's membership includes the largest environmental engineering consulting company in the world. CH2M Hill, Battelle Pacific Northwest Laboratory, Rydel Environmental Services, also a large environmental consulting firm, analytical laboratories, consulting scientists and engineers, research and technology development companies, and manufacturers of equipment and technology. Many of these organizations have already been active in international markets, while others have experienced real barriers to exporting their goods and services.

Less than 6 percent of the environmental consulting business conducted by U.S. firms last year was done internationally. By comparison, I understand the German industry exports approximately 40 percent of their gross sales.

While estimates on the size of the national and international markets may vary, there is widespread agreement that the markets are large and with respect to the global market that the market is growing rapidly. There is also agreement that international competition is strong and significant.

As to the growth opportunity that this industry provides, Oregon has gauged its environmental sector at 2.8 percent of the State's gross domestic product and contributing over \$600 million to the State's 1992 payroll. State economists have projected employment in the industry will continue to grow at 4 percent for the remainder of this decade. OETA believes greater growth can be realized with fast and coordinated action on the part of the industry, government and academia.

These partnerships are absolutely necessary and I would like to applaud the Department of Commerce and Secretary Brown for their early efforts in bringing together the various agencies of the United States Government already involved in the environmental industry. Marketing support is necessary.

Our competition, whether from Germany, Japan or Canada, is supported by their government in competing with U.S. firms for business here in the United States as well as around the world. Export assistance for services and technology is necessary, and terminology aside, I believe that we are talking about equipment as well as the actual technology.

I would like to thank you again for having me here today. I don't want to take up any more time, but I do believe that this legislation is critical to the success and growth of this industry. Thank you.

Mr. STUDDS. Thank you very much, sir.

[The prepared statement of Mr. Snyder can be found at the end of the hearing.]

Mr. STUDDS. Well, it is obvious this is what the late Senator Dirksen would have called an idea whose time has come, and I don't suppose it behooves us to spend a lot of time thinking about it. We should proceed. It is one of those rare confluences of opportunities when we have the chance to do something both beneficial and prosperous at the same time. The very concept of it would have thrilled our puritan ancestors. These things don't happen often and it would seem to me to be the most fundamental common sense to proceed as quickly as we reasonably can.

Mr. Hecht, you say we have captured the spirit of what the administration is about here. That is wonderful. That makes me feel fine, but we need to focus a little on the letter as well as the spirit since we find it difficult to codify in spirit or legislate spiritually.

All of you have expressed enthusiastic support for the concepts presented here and each of you is a part of the effort to get results, whether in the private or public sphere. Those of you in the private sphere I think are sterling examples—I will congratulate whoever picked this array from large business to small—illustrations in and of yourself of what it is we are all about.

We have the classic small business matrix symbolizing both the opportunity, the risk, and the problem, and a large corporation such as Raytheon saying it wants to play, too, and seeing, as I understand you to say, that you could benefit as well, notwithstanding your magnitude, from some of the things that are proposed here.

It is all here. It is our hope, and I know it is Congressman Kennedy's hope in the Banking Committee, to move this legislation as fast as we responsibly can. I see no point in doing anything other than that and I would appreciate your help with respect to some of the specifics.

You have seen what we have laid out here. Is the role we have here for the public and private sector the right mix? Are we learning as much as we need to learn from our potential competitors or our real competitors, such as Japan and Germany, to whom almost everybody referred? Do we need six regional centers? Do we need more or less? Do we need centers abroad? Is there too much structure here or not enough; or does it look about right to you?

Does the Peace Corps, which I know is something Don Connors feel strongly about as a component of this, make sense? Maybe it captures the spirit of both doing good things and prospering simultaneously.

Does anybody want to address in any way the particular components of the legislation or specifics therein? I don't mean in enormous detail. We will work with you subsequently on that, but are we, generally speaking, heading in the right direction or are we astray significantly in any of those component parts? Anyone? Who wants to start? Mr. Woollen?

Mr. WOOLLEN. Let me take a crack at it on a couple of the issues. First of all, the regional business centers in the U.S., six is probably about the right number from a geographic dispersion point of view. It is crucial to industry, not only small industry but also

large industry, that we have a place where we can build a critical mass.

I can envision a center in the Northeast, one in the Northwest, one in the Midwest, one in the South. I guess Texas gets their own and one in the Southwest where those who are in the industry have a place to come together to not only know who each other are but also to learn how to export.

There is one thing I have learned in my business, as you know, Congressman, and Chairman, we have tried to help small industry in the New England area. A lot of the smaller companies have the technology capability but don't know how to go to the international market and save money doing it. They cannot get there efficiently. So the idea of business centers is a strong concept.

At the same time, it will be crucial in important countries like China, like Southeast Asia, like in Africa, like in India, to put some sort of business center on the ground where an American business that goes over there has a support structure.

I might add right now that the Foreign Commercial Service has done a superb job of helping industry. When we go over, we get a lot of assistance. That should be strengthened and supported. But the idea of a business center where a businessman can go and get assistance on the ground in other places is very important to me.

Let me make one comment on the Peace Corps issue because this is crucial, too. When we as a company want to sell a power plant to a developing nation, the developing nation would normally like to buy the lowest cost power plant they can buy, notwithstanding what the pollution impact is. Where the Peace Corps can help is by going in to developing nations to teach environmentally friendly or sustainable development. That knowledge does not exist around the world. So the idea of taking volunteers over and having them understand the value of sustainable development makes a lot of sense. So I applaud that issue, also.

Mr. STUDDS. Mr. Sallet.

Mr. SALLET. Mr. Chairman, as you know, we are in the process of formulating our strategy, so I might not have comments as specific as we will have shortly, but let me note what I think are a couple of the principles of your legislation and note why I think they are not only the right idea but why they are consistent with what the administration is doing.

As I take from your legislation, there are five basic points that are of chief concern to the Department of Commerce. The first is a mandate of coordination of administration efforts. That is very important to us. It is part of our own work and with the TPCC. There are a lot of Federal programs doing good things already along these lines but your legislation makes a point of noting the importance of making sure that we are coordinated and effective, and that is along the lines with what we are already doing and hope to do more of.

Secondly, a lot of the Department of Commerce, frankly, is the flow of information from people who obtain it to people who need it. Your bill and its emphasis on one-stop shopping goes in that same direction in order to make sure that information is gotten out efficiently to people who can use it so that the marketplace can then work to create and exploit the opportunities.



The third principle I find in your legislation is its emphasis on our work with the private sector. I have noted that earlier in my oral statement—it is key to what we are doing. We are revitalizing our own private sector outreach program at the Department of Commerce, and will be doing that in this area and other areas. It is fundamental because it is not our job to control the marketplace but to work with the businesses and learn from the marketplace about what government can do well.

Fourth, your regional environmental business and technology centers we think is an idea that has a lot in common with the manufacturing extension programs and technology centers we hope to implement over the next few years. Part of the President's vision, in fact, it seems to me, is quite compatible in both design and intent with those systems.

And, finally, and this is what the previous witness just alluded to, having support abroad. Our foreign commercial service programs already are doing that, but the Secretary is committed to doing that better and in a way that takes advantages of emerging opportunities in markets that perhaps have not been as open to American businesses in the past.

So while I am now constrained in terms of the finality of administration review in talking about more specifics, I can say these five principles that I find in your legislation are entirely compatible with what we hope to achieve.

Mr. STUDDS. Those of you who wish to respond to my initial question will have a chance to do so on the second round, but quickly following up; is there a danger we are duplicating unnecessarily existing services? You have foreign commercial attaches abroad, you have some kind of technology centers around the country, so are we adding layer upon layer unnecessarily here?

Mr. SALLET. I don't think we have too much assistance out there but as we build up the kind of assistance we are going to provide both home and abroad, we do have to take a careful view of how to deploy resources strategically. They are not pulling in different directions but it is exactly right to note we want to work it through to make sure we do it as efficiently as possible.

Mr. STUDDS. I will come back. You will all get a chance on the second round. The gentlewoman from Oregon, the distinguished progenitor of this legislation.

Ms. FURSE. Thank you. A couple of questions I think following up on what you are saying.

I noticed, Mr. Snyder, your remark in your testimony about consortia rather than centers. Would you like to develop that idea, why you think one is perhaps more beneficial than the other; and is it a major problem or is it something we can work around?

Mr. SNYDER. Actually, I don't think it is a major problem. I think it is probably more a problem of semantics and my understanding of the terminology. As I have heard the regional centers described here today and discussed, I feel that what is really needed is a physical center but one that brings into partnership and into collaboration all those agencies and organizations and private businesses that are involved in this area already.

We are really blessed in Oregon with a large number of such organizations, research institutions, training institutions, State and

private trade organizations. I also know our colleagues in the Northwest, particularly in Washington State, have similar organizations. I think it is important that we don't leave behind the groundwork that has already been laid there.

As I mentioned, the Pacific Northwest economic region has been active since 1989 and has as a primary goal building that industry in the global marketplace.

Ms. FURSE. If I may, Mr. Chairman, Mr. Woollen, I felt like I had left you out when I said small and medium-sized business and I was just thrilled to hear how large business is. I want to know if you could comment on whether you think the environmental technology industry might be a real possibility for economic conversion. By that, you do large military contracts and so could you, from your experience, be able to share some ideas with us about whether this might be a way we can convert some of the military work into civilian?

Mr. WOOLLEN. Congresswoman. I would be delighted to.

First of all, let me comment on what a big business is. A big business is really an accumulation of separate business centers or little businesses under one name. You might also recognize that we have in Raytheon more than 5,000 subsidiaries (subs) and vendors. So when we go and sell any product, doesn't matter whether it is a power plant or an airplane, probably 60 percent of that content comes from the sub and vendor base. So when we go overseas, we take our vendor base with us.

Let me address your question specifically, and for this I am particularly grateful for the Chairman's support.

We are right now in the process, very actively, in converting defense technology to environmental use. I will give you one immediate example. We took what we now know as military surveillance and warning communications, and control technology, the kinds of capability used in Kuwait during Desert Storm. We are applying this capability to environmental surveillance and monitoring and proposing it to the Government of Brazil with the good support of the Chairman. And the Chairman and a number of other people have gone to the White House and asked for assistance with this program so we thank you.

A lot of what we learned in the military theater area, monitoring and control, is directly applicable to wide area monitoring control of the forest, tree stress assessment, illegal cutting, illegal gold smuggling and, most importantly, if you know how gold is smuggled, the mercury residue is dumped in the water. So you also have an environmental problem in the water. This capability to monitor is only one area where military technology directly benefits the environment. And I think we could go on for hours to talk about that.

Yes, it is an important conversion opportunity; yes, it can be done and it is a direct use of not only the engineering talent but also the manufacturing talent.

Given enough time, you can take a factory, move it out of the military production and turn it into building products for the environmental market. We are beginning that now and I thank you for asking.

Ms. FURSE. Thank you so much. Thank you,  
Mr. Chairman.



Mr. STUDDS. The gentleman from Maryland.

Mr. GILCHREST. Thank you, Mr. Chairman. Mr. Kennedy looked pretty good on the Minority side.

I will ask just three or four different questions and, anybody on the panel, I would appreciate your input and an answer.

Many of you raised, and Mr. Kennedy also raised this as an issue, that we do very well at research and development but we do poorly, for whatever reason, at least that is what the suggestion was, at commercializing, in creating the jobs to market what we research.

Could some of you explain what it is about the United States, our free market economy, a tax structure, what is it that causes us to do more poorly on commercializing our products when many of you have said that-I think one of you made a comment about 70 percent of the environmental controls are actually owned by foreign companies and that much of the research that we do is adopted by them and then they do the manufacturing. So what is it about the United States that causes us not to make that leap?

Mr. SCHOFIELD. If I may respond to that. A couple of different things. First of all, we are talking about the difficulty of commercializing technology, environmental technology particularly, and as you know environmental technology, to a large degree, is regulatory driven. It is extremely difficult to get somebody to try that technology for the first time. There is no method of demonstrating technology.

Why is there no method of demonstrating technology? I think the best analogy I can take to explain this further is a comparison with the pharmaceutical industry which has been very successful in bringing out new drugs and commercializing those on a worldwide basis.

If I am the inventor of aspirin, I can invent aspirin and then go through a known program with the FDA to get that product approved or not approved. And in the course of going through that approval process, which may be lengthy and costly, I pass certain milestones and as I pass those milestones I can also attract funding which particularly applies to those milestones. But at the end of the day I emerge with a product that I can sell to everybody in this room, everybody in any State, anybody in the world. And if you want to buy it a second and a third time, you can do that. Contrast that with environmental technology.

I develop a technology. There is no certified process to go through to certify that technology. If I wish to sell that technology, I have to go from door to door to find somebody who is willing for the first time to try an uncertified technology that does what I say it will do, but I have no demonstration that will prove it.

In addition, the buyer of that technology has to obtain a permit for that technology and has to go through a very difficult situation and if the performance of that technology fails, then there is no relief for a best effort basis.

If he wants-suppose he is successful and the information gets around? If now I want to sell that same technology to another company in another State, I have to go through exactly the same process. Or if the same company wants to buy it for a second time, I have to go through the same process. It is like developing aspirin

and asking every user every time they want to take an aspirin to get a permit to do so.

Mr. GILCHREST. Do you feel this bill can lead these various agencies to come up with a certification process similar to what you just described?

Mr. SCHOFIELD. I think that part of this strategy and part of the focus of this strategy, what it is doing is bringing together in commerce, in the regulatory agencies and industry, the opportunity for the first time to discuss and remove the barriers to the commercialization of technology. If we don't do that, that is why the technology goes overseas. In Germany there is no such barrier.

Mr. GILCHREST. Can we use Germany and Japan and other countries that are successful at this as a model to adopt in this country?

Mr. SCHOFIELD. Absolutely. Absolutely.

Mr. GILCHREST. Yes, sir.

Mr. CONNORS. If I might add just a little bit. On the strategy document that is appended to my testimony, you will see a discussion of the barriers on technology innovation and its diffusion. Mr. Schofield has identified one of the critical issues for the environmental industry, that is one of the critical issues that the environmental industry association intends to focus its energy upon, and I know that EPA has taken a very active role in dealing with this particular issue and there are major changes under way in that agency.

Mr. HECHT. I think you raise an extremely important area and a good question, and one that I think will be addressed.

There are certain lessons you can learn from looking at how the Japanese approach the problem. I think the first thing that is appropriate to our kind of thinking is to look at a more concentrated strategy and the more integrated way of looking at the problem of technology as it develops in—let's say, a government laboratory or in the marketplace—in a laboratory and its movement to the marketplace and its relationship to some technical assistance or more organized export program. The Japanese have a total integrated strategy which helps move things along from the marketplace out to overseas.

I think we are beginning to explore how we can achieve that, but not perhaps in the same way. Just as an example, I was in Japan looking at some of the laboratories. If a laboratory develops a product that is close to commercialization, they can easily move government people from one agency to another and bring in private sector people to work with government people, organized around the product, to give it an accelerated program, additional resources and move it forward. They have that kind of flexibility.

We have to approach it in a different fashion and we have elements of such programs here, such as under the Federal Technology Transfer Act where we have cooperative kinds of agreements that we can undertake with industry. There are many such programs in our agency at EPA and I am sure at Commerce and elsewhere. But I think what is missing is the more integrated view of how all this flows into a real program and that is the importance of a strategy.

In our agency, we have some experience in, I would say certification is the wrong word, but in testing of environmental technology,

particularly in cleanup of Superfund projects where for a given technology, we can provide a demonstration project and provide technical information on how well that technology did under a particular set of circumstances. This program is one example, and we can speak to that program and demonstrate it and showcase it overseas as a way to show that, under "these" conditions, this kind of technology has achieved the following results.

We would like to explore within our agency how many other areas we can do that with, also in the area of—I shy away from the word "certifying" because we do have to be careful in our agency about endorsing a particular company because of legal questions—but we do have in our future thinking and in the President's program the hopes of being able to provide through our laboratories just the kind of test environment that you mentioned. And I think we have a facility in Arkansas perhaps to take an emerging technology, test it to see what it really does under controlled conditions (but in a real life kind of situation) as a way of helping get further information on the applicability of this kind of technology to overseas conditions.

So I think you raise a very, very important area and one which I know all of us are concerned about and are looking for ways within our agencies and collectively, to give it some impetus.

Mr. GILCHREST. Thank you.

Mr. STUDDS. Thank you. The gentleman from Rhode Island.

Mr. REED. Thank you, Mr. Chairman.

Mr. Sallet, could you elaborate a bit more on the Commerce Department's activities with respect to manufacturing extension and environmental technologies?

Mr. SALLET. Yes, sir, I would be happy to.

This is an important point, I think. Sometimes when we talk about technology policy it sounds as though we are talking about a series of high-tech science fairs. In fact, there is a lot of very good science, but the manufacturing technology programs are designed also to deal with real problems of economic growth, to allow manufacturers to have access to the kind of technology that will allow them to turn technological progress into real economic advancement.

As you know, Congressman, part of the President's program in his technology policy is to significantly increase the size of the manufacturing extension programs at the Department of Commerce. They include manufacturing technology centers, smaller outreach centers, manufacturing outreach centers that will combine to be able to work with local manufacturers. And I think this is an important point, given the kind of assistance that local economies need.

The economy of the United States is not homogeneous all over the country. There are different needs and different expertises in different parts of the country, and the extension programs are designed to be able to deal and provide the kind of expertise that different parts of the country need.

In addition, we are funding State programs and we want to use part of the information infrastructure super highways, the proposal of the President to help link up manufacturers even more concretely to expertise that may not be near geographically. We have seven

such manufacturing centers already in business and open and we have seen, thus far, that they can be of great help in environmental concerns in two principal areas. One is energy efficiency, making the manufacturing processes use less energy and therefore diminishing some of the environmental problems that arise from energy production; and secondly, waste reduction, recycling or using or reducing waste so that manufacturing can be less expensive and more environmentally friendly.

These are the kinds of goals that we have begun to achieve and we think we can continue to achieve with the kind of program that the Chairman's bill outlines.

Mr. REED. Thank you. A follow-up question. The Chairman's bill, along with my colleagues from the Hill, are talking about what we can do to enhance envirotechnology. What is the department doing today to enhance this export of environmental technology?

Mr. SALLET. We are doing two different kinds of things. Through our normal trade development programs we are, of course, trying to provide information about markets to U.S. manufacturers, but we are doing something else I think is particularly of note. NOAA, the environmental part of the agency, is helping with some training programs in foreign countries, working with the creation and monitoring of environmental problems to help create the kind of demand abroad that will itself create opportunities for independent companies.

For example, and this was discussed in testimony given to the Subcommittee in February, we are working with the United Nations environmental program, coastal zone management program, to provide training in foreign countries. NOAA is now collaborating with the Army Corps of Engineers and the University of Rhode Island Coastal Resources Center to develop and provide training in areas of Africa and this is the kind of management program which will lead to the adoption of environmental regulations which itself will create a demand for U.S. products and services.

Mr. REED. Thank you. Let me just raise a final, much broader question for the panel. It seems to me that much of the demand for environmental technology is driven by governmental actions. They impose rules and regulations and companies look now to find technology to meet those rules and regulations. They also are themselves consumers of environmental technology through municipalities, through State and other national governments. I wonder as we go forward with this export technology, to what extent we are attempting legitimately to influence other nations to be more demanding and more assuming of environmental technologies? Gentlemen.

Mr. CONNORS. If I may make just a few comments on that subject. You have touched on a subject that I am probably as interested in as any part of this entire initiative, and it is the market drivers for environmental goods and services, which, by the way, include education and training, in my view, are the development of affirmative laws by nations.

Now, I went to the earth summit and came back from the summit in Brazil last year with a profound concern for the state of the global environment but with an understanding of the extraordinary meaning of that event, that more heads of government in

the world came together around the environment than have come together for any subject in the past. That means that nations around the country, around the world, in the implementation of Agenda 21 are going to be focusing on the development of new legal systems which will lead to new regulations, new policies, creating the opportunities for the sale or capacity building processes in goods, services, education and training.

Now, the role of the U.S. EPA and U.S. AID in this regard cannot be understated. As I have traveled around the world in the Far East and Africa and in Central Europe, I have been struck by the respect that our Environmental Protection Agency enjoys in all parts of the world. It seems to me an element of the strategy that we develop should be facilitating the transfer of the experience and skills and knowledge that we have now institutionally in the Environmental Protection Agency and in the Agency for International Development, however, that is ultimately going to be described.

There are also some nongovernmental organizations engaged at work that could help to drive the capacity building function, and that is part of the role of this experienced Peace Corps volunteer notion, is capacity building, so that when laws are adopted, that there is the ability to implement those laws. And the role of the environmental industry is to bring to the table the goods, services, experience on how you, in fact, implement modern environmental management programs.

It fits together in the capacity building-understanding the market drivers and then delivering the competence and environmental goods and services to nations throughout the world.

A final thought, Mr. Snape mentioned something we think is very important, that is the relationship between trade and the environment. The North American Free Trade Agreement is a very important and we think very positive development for the U.S. environmental industry. We support it without qualification because it demonstrates how another form of market driver can create the demand for environmental goods and services and deal with environmental problems.

Mexico will be the beginning. There will be other nations who will wish to engage in free trade and this linkage that we will construct there will be a marvelous, marvelous example of how we can proceed in the future.

Mr. HECHT. If I can add one point. Don I think has made the general comment that EPA is more respected perhaps the further you get away from Washington, but I think it is one of the reasons-

Mr. REED. Don't feel bad.

Mr. HECHT. It is one of the reasons we believe we are a secret weapon in the U.S. arsenal of environmental technology assistance and promotion, because we are asked repeatedly through our technical and bilateral assistance what kinds of technologies are appropriate, who should we talk to, how should we construct our environmental laws.

We have had ministers coming in to see our new administrator, Carol Browner, since the election. I recall the Israeli minister particularly came in and said, I want our environmental laws to emulate the United States.

So we have an opportunity to help in setting standards and setting goals and setting approaches. When we promote pollution prevention, when we promote waste minimization, we are promoting a section of an industry that will have a chance to better compete for environmental markets, and I think that is why in many ways this capacity building role that we do, that NOAA does, and others, is so very important.

With respect to Mexico, this is one of the largest growing environmental markets the United States is going to have. Secretary Brown and Carol Browner and several of us were in Mexico last month or so and it is very clear that as Mexico begins to wrestle with its environmental problem, it would really like to work with the United States. The times we have lost out on sales to Mexico have been, and this is a lesson to learn, because the financing provided by the Japanese and others has been better. But Mexico's desire, as expressed to us, is certainly to look to the United States for the kind of expertise in technology, and we are trying to take advantage of that in many ways.

Now, we have started a program with Mexico to put EPA people into Mexican agencies to work with them on a long-term basis, and I don't have to tell you that we are not alone in doing that, because there are Japanese and Germans and many others there, many of whom are doing far more than we are doing in terms of writing legislation and contracts and things of that sort.

But I think it is an enormous market and the role of capacity building and technical assistance is expressed in the bill but we would like to see it also expressed in the actions that we finally develop in our strategic plan.

Mr. REED. My time has expired.

Mr. STUDDS. I will give you a chance, as we go to the final round here.

Mr. REED. I thank the gentleman.

Mr. STUDDS. Thank you. Don't go away.

I will give the gentleman who didn't on the first round respond to my somewhat specific question regarding legislation, in terms of have we got it right or are we way off base, a chance to respond. Don, I know you wanted to add something.

Mr. CONNORS. Mr. Chairman, I just had one or two final thoughts. Various speakers on the panel have dealt with each of the various sections of the legislation and I think I hear a concurrence that the framework as proposed is pretty sound.

Like to add one final thought. As we talk about capacity building in nations around the world, and I noticed in the Financial Times a couple of days ago an interesting article about Chile and its interest in developing a new modern environmental management and policy system. I said instantly, I said, now there is another opportunity for the U.S. environmental industry, it seems to me as the legislation is constructed, it contemplates a partnership between the appropriate Federal and State and industry participants.

Once EPA and NOAA or U.S. AID have done their excellent work in transferring knowledge and experience, we need to be sure that the industry, and part of the reason for the regional centers is to accomplish this result, knows of the opportunities, and that the industry is capable, and we think it needs to be done through a



trade association working with local trade associations, to get to those markets to be sure that the doors are opened so that there is an opportunity for our companies on goods and services to make the proposals and we think sign up the work.

You have to have the industry in the middle of the process, I think.

Mr. STUDDS. Anyone else?

Mr. SCHOFIELD. Yes, I want to make one comment, Mr. Chairman, and that is that I believe this bill will be enhanced if included within it, in terms of its main objective, rather than just to encourage and promote opportunities to provide these services to the global market, that this bill included to encourage the commercialization of environmental technology and promote its application, et cetera, et cetera.

Because I believe that the trade council and the business centers will not be addressing the crux of the problem if they do not address the issue of the commercialization of this technology rather than just the sale directly of the technology itself.

Mr. STUDDS. I think you may have just written some law. Yes, sir.

Mr. SNYDER. Yes, I would also like to add to the previous question. The World Bank in its 1992 report on development and the environment, I made reference to it in my written comments, but just quickly, the positive links between economic efficiency and protection of the environment will also drive these markets, whether it be in Mexico or in Taiwan or even in the developed nations of the world in the future. The economic benefits that come as a result of energy efficiency, more efficient use of resources, waste minimization, and pollution prevention actually result in a protected environment or preserving the quality of the environment.

Also, I want to mention, we talked about defense conversion. Being from the Northwest, I would like to talk about timber conversion. Many of our equipment manufacturers in the Northwest, over the last several years, have focused their attention on markets that come under this broad umbrella of the environmental industry, specifically in the areas of material handling, waste management and resource recovery.

I would like to just give one quick example. There is a company in my town called Ross Equipment that manufactured large-scale logging equipment for 25 years, exclusively. Several years ago, in the mid-1980's, when the timber economy first seriously started to sour, they looked at the opportunities within the waste management and resource recovery area and have developed several lines of equipment and are now manufacturing equipment to assist that industry that are actually bigger ticket capital good items than the ones they used to sell domestically to the timber industry. Thank you.

Mr. STUDDS. Thank you. Yes, Mr. Snape.

Mr. SNAPE. Let me make one point to explicitly make the connection between your bill and the proposed NAFTA. The North American Commission on the Environment, which appears as though it is going to happen in one shape or another, already possesses mechanisms, at least in the draft, that would have the opportunity for public petitions, commission reports, commission investigations

and a commission complaint mechanism that would have also a degree of consultation.

When you combine the reality of NACE with some of the themes we have heard this morning, such as the need for greater information flow, the need for built-in marketing mechanisms for our exports, and the realities that government action often drives the technology push, I cannot think of a better mechanism (at least for Mexico and maybe other Latin American countries as they come on to NAFTA) than the NACE. I think the opportunity is tremendous.

I think there are a lot of different ways you could legislatively or administratively make that connection, but it is an ideal connection and one I urge you to think about.

Mr. STUDDS. I appreciate that. Mr. Hecht?

Mr. HECHT. Mr. Chairman, one additional thought. I think the elements of a strategy are all here. It is early for us to comment specifically on it, but one of the things we are doing as part of this strategy development is to generate an inventory of the existing programs. I think this will be very useful as we think through your legislation and we revise it. Because it turns out that there are many, many things going on in all the agencies which for the first time we can look at across the board and see their extent.

We are all involved in training, in export promotion in various ways. We have all provided, I think, our information to Jonathan Sallet and the team at Commerce, and I think this inventory will be an early product in the development of this strategy, and I think that will be a useful thing to look at as we think about the details of your legislation as well as others.

Mr. STUDDS. Thank you. The gentlelady from Oregon.

Ms. FURSE. No more questions.

Mr. STUDDS. Let me just conclude, then, by saying that I believe this is honestly one of the most significant and in many respects most exciting hearings we have had in a long time. I think we have a uniquely appropriate combination of witnesses each from a different perspective all saying we are essentially heading in a very important direction and essentially in the right way.

We will try to get the details right. We will try to move as quickly as we can. As I say, these kinds of opportunities do not come accidentally or on a daily or weekly basis, so I want to thank each of you for your help.

We are going to draw on your particular expertise, both public and private, in the next few weeks as we try to move this legislation as promptly as possible.

Don, I particularly thank you for your leadership in this area, and for all of you, it is a very promising endeavor. The Subcommittee stands adjourned.

[Whereupon, at 11:45 a.m., the subcommittee was adjourned, and the following was submitted for the record:]



103D CONGRESS  
1ST SESSION

# H. R. 2112

To provide for the development and implementation of a national strategy to encourage and promote opportunities for the United States private sector to provide environmentally sound technology (including marine biotechnology), goods, and services to the global market, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

MAY 12, 1993

Mr. STUDDS (for himself, Ms. FURSE, Mr. OLVER, Mr. KENNEDY, Mr. LAUGHLIN, Mrs. UNSOELD, Mr. MANTON, Mr. HUGHES, Mr. LANCASTER, Ms. ESHOO, and Mr. THOMPSON of Mississippi) introduced the following bill; which was referred jointly to the Committees on Foreign Affairs and Merchant Marine and Fisheries

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## A BILL

To provide for the development and implementation of a national strategy to encourage and promote opportunities for the United States private sector to provide environmentally sound technology (including marine biotechnology), goods, and services to the global market, and for other purposes.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “National Environ-  
3 mental Trade Development Act of 1993”.

4 **SEC. 2. FINDINGS.**

5 The Congress makes the following findings:

6 (1) The global market for environmental tech-  
7 nology (including marine biotechnology), goods, and  
8 services, is now \$270,000,000,000, and is estimated  
9 to grow to \$500,000,000,000 by the year 2000.

10 (2) The global environmental market has been  
11 stimulated by the increased environmental awareness  
12 of developing nations, the emergence of new repub-  
13 lics in the former Soviet Union and Eastern Europe,  
14 increased public awareness of the importance of en-  
15 vironmental protection, and the actions taken by na-  
16 tions at the United Nations Conference on Environ-  
17 ment and Development, which was held at Rio de  
18 Janeiro on June 3–15, 1992.

19 (3) The United Nations Conference on Environ-  
20 ment and Development adopted “Agenda 21”, which  
21 calls on all nations to develop and implement na-  
22 tional strategies for sustainable development of their  
23 natural resources, including the wise use of their  
24 ocean and coastal resources, and urges developed  
25 countries to enter into technology cooperation ar-

1 rangements with developing countries for the provi-  
2 sion of environmentally sound technologies.

3 (4) The United States private sector has devel-  
4 oped regional clusters of environmental businesses,  
5 nonprofit organizations, and educational institutions  
6 in response to United States environmental laws and  
7 regulations.

8 (5) The United States historically has domi-  
9 nated in the development of environmentally sound  
10 technology (including marine biotechnology), goods,  
11 and services, but has never gained a corresponding  
12 share of the market outside of the United States, in  
13 part because other countries have more extensive  
14 programs to assist the private sector in environ-  
15 mental export promotion.

16 (6) Experts estimate that the United States  
17 private sector could create over 300,000 new jobs by  
18 the year 2000 based on an increased share of the  
19 global market for environmental technology.

20 (7) At least 12 Federal agencies have some type  
21 of export promotion program, but no single agency  
22 has overall responsibility for export promotion and  
23 no agency is clearly responsible for the promotion of  
24 environmental technology exports.

1           (8) Promoting United States environmental ex-  
2       ports to the global market will create jobs, assist na-  
3       tions to implement sustainable development pro-  
4       grams, including the wise use of ocean and coastal  
5       resources, and enhance the role of the United States  
6       as a leader in global environmental policy.

7   **SEC. 3. POLICY AND PURPOSE.**

8       (a) **POLICY.**—The Congress declares that it is the  
9       policy of the United States to maintain and enhance the  
10      role of the United States as a leader in exporting environ-  
11      mental technology (including marine biotechnology),  
12      goods, and services to the global market for the benefit  
13      of the global environment and to increase private sector  
14      jobs in the field of environmental technology (including  
15      marine biotechnology).

16      (b) **PURPOSE.**—It is the purpose of this Act—

17           (1) to encourage the United States private sec-  
18      tor to export, and assist the United States private  
19      sector in exporting, environmental technology (in-  
20      cluding marine biotechnology), goods, and services  
21      in order to carry out the policy set forth in sub-  
22      section (a);

23           (2) to authorize the President, acting through  
24      the Office of Environmental Policy and the National  
25      Economic Council, to coordinate the relevant policies

1 and programs of Federal agencies to carry out the  
2 policy set forth in subsection (a);

3 (3) to direct the Secretary of Commerce to en-  
4 sure that the policies and programs of the Depart-  
5 ment of Commerce, including those of the National  
6 Oceanic and Atmospheric Administration, are con-  
7 sistent with and will help carry out the policy set  
8 forth in subsection (a);

9 (4) to establish the Environmental Trade Pro-  
10 motion Council of the United States, a public-private  
11 partnership, and require the Council to develop a  
12 national strategy to promote environmental exports;

13 (5) to authorize matching funds to qualified re-  
14 gional environmental business and technology co-  
15 operation centers to provide export assistance, edu-  
16 cation, and training to small- and medium-sized  
17 United States businesses entering the global environ-  
18 mental market and to provide appropriate training  
19 to foreign nationals;

20 (6) to establish a senior-level environmental  
21 service corps within the Peace Corps through which  
22 experienced environmental professionals would assist  
23 developing countries and emerging democracies to  
24 develop and implement their sustainable development

1 programs, including programs to promote the wise  
2 use of ocean and coastal resources; and

3 (7) to authorize the Secretary of Commerce to  
4 establish American Business Centers, including En-  
5 vironmental Business Centers, in nations that offer  
6 promising new markets for United States environ-  
7 mental technologies.

8 **SEC. 4. UNITED STATES ENVIRONMENTAL TRADE PRO-**  
9 **MOTION STRATEGY.**

10 The President, acting through the Office of Environ-  
11 mental Policy and the National Economic Council, shall  
12 coordinate the export promotion programs of Federal  
13 agencies to ensure that these programs are consistent with  
14 and implement the national strategy to increase environ-  
15 mental exports that is developed by the Environmental  
16 Trade Promotion Council under section 6.

17 **SEC. 5. COMMERCE DEPARTMENT PARTICIPATION IN ENVI-**  
18 **RONMENTAL TRADE PROMOTION STRATEGY.**

19 (a) REVIEW.—The Secretary shall review the applica-  
20 ble policies and programs of the Department of Com-  
21 merce, including those of the United States and Foreign  
22 Commercial Service and other components of the Inter-  
23 national Trade Administration, and those of the National  
24 Oceanic and Atmospheric Administration, to ensure that  
25 these policies and programs are consistent with and imple-

1 ment the national strategy to increase environmental ex-  
2 ports that is developed by the Environmental Trade  
3 Promotion Council under section 6.

4 (b) REPORT TO CONGRESS.—The Secretary shall re-  
5 port to the Congress any policies and programs that are  
6 found in the review conducted under subsection (a) to be  
7 inconsistent with the national strategy developed under  
8 section 6 and make recommendations for any legislative  
9 changes needed in the authorities of those programs to  
10 remove the inconsistency.

11 (c) 1-STOP SHOPS.—

12 (1) AT THE DEPARTMENT OF COMMERCE.—The  
13 Secretary shall establish at the Department of Com-  
14 merce a 1-stop shop to provide information to Unit-  
15 ed States businesses selling environmental tech-  
16 nology (including marine biotechnology), goods, and  
17 services on applicable technical and financial assist-  
18 ance programs of the Department, potential global  
19 market opportunities, including trade fairs, for those  
20 businesses, and on international environmental regu-  
21 lations.

22 (2) AT UNITED STATES AND FOREIGN COMMER-  
23 CIAL SERVICE OFFICES.—The Secretary shall estab-  
24 lish at appropriate offices of the United States and  
25 Foreign Commercial Service 1-stop shops to provide

1 information described in paragraph (1) to United  
2 States businesses selling environmental technology  
3 (including marine biotechnology), goods, and services  
4 in the district or area served by each such office. In  
5 operating such shops outside the United States, the  
6 Secretary shall cooperate with the Regional Environ-  
7 mental Business and Technology Cooperation Cen-  
8 ters described in section 7.

9 **SEC. 6. ENVIRONMENTAL TRADE PROMOTION COUNCIL.**

10 (a) **ESTABLISHMENT.**—The President shall establish  
11 an Environmental Trade Promotion Council (hereafter in  
12 this Act referred to as the “Council”).

13 (b) **MEMBERSHIP.**—The Council shall be composed of  
14 the following members:

15 (1) The Secretary of Commerce.

16 (2) The Secretary of Energy.

17 (3) The Administrator of the Environmental  
18 Protection Agency.

19 (4) The Administrator of the Agency for Inter-  
20 national Development.

21 (5) The Director of the Trade and Development  
22 Agency.

23 (6) The President of the Export-Import Bank  
24 of the United States.



1           (7) The President of the Overseas Private In-  
2       vestment Corporation.

3           (8) 6 individuals appointed by the President  
4       from among representatives of the United States en-  
5       vironmental technology industry, including one rep-  
6       resentative of the marine biotechnology industry.

7           (9) 3 individuals appointed by the President  
8       from among representatives of labor, consumer pro-  
9       tection, and environmental conservation organiza-  
10      tions.

11          (10) 3 individuals appointed by the President  
12      from among representatives of the States and asso-  
13      ciations representing the States.

14      (c) CHAIRPERSON.—The Secretary shall serve as the  
15      chairperson of the Council.

16      (d) FUNCTIONS OF THE COUNCIL.—The Council  
17      shall—

18          (1) develop a national strategy to increase ex-  
19      ports of United States environmental technology (in-  
20      cluding marine biotechnology), goods, and services;

21          (2) work with the Environmental Trade Pro-  
22      motion Working Group of the Trade Promotion Co-  
23      ordinating Committee in developing the national  
24      strategy referred to in paragraph (1);

1           (3) prepare an action plan to implement the na-  
2           tional strategy, including recommended guidelines  
3           for agencies represented on the Council and the En-  
4           vironmental Trade Promotion Working Group re-  
5           ferred to in paragraph (2) to take action within their  
6           respective agencies to promote exports of environ-  
7           mental technologies;

8           (3) submit the national strategy and action  
9           plan simultaneously to the President and the Con-  
10          gress by April 30, 1994; and

11          (4) make periodic reports to the President and  
12          the Congress on the achievement of the goals of the  
13          national strategy and the action plan.

14          (e) STAFF AND ADMINISTRATION.—

15           (1) SUPPORT SERVICES.—The Secretary shall  
16           provide to the Council such administrative and tech-  
17           nical support services as are necessary for the effec-  
18           tive functioning of the Council.

19           (2) OTHER SUPPORT.—The Administrator of  
20           General Services shall furnish the Council with such  
21           offices, equipment, supplies, and services as the Ad-  
22           ministrator is authorized to furnish to any other  
23           agency or instrumentality of the United States.

24           (3) COMPENSATION AND EXPENSES.—

(A) Except as provided in subparagraph (B), members of the Council shall each be paid the daily equivalent of the minimum rate of basic pay payable for grade GS-15 of the General Schedule for each day during which they are engaged in the actual performance of duties vested in the Council.

(B) Members of the Council who are officers and employees of the United States may not receive additional pay, allowances, or benefits by reason of their service on the Council.

(C) Each member of the Council shall receive travel expenses, including per diem in lieu of subsistence, in accordance with sections 5702 and 5703 of title 5, United States Code.

(f) DISCLOSURE OF FINANCIAL INTEREST.—Each member of the Council appointed under paragraph (8) or (9) of subsection (b) shall file with the Secretary, before serving on the Council, a statement of financial interest that that individual, or the spouse, minor child, or partner of that individual may have in an activity that may be addressed by the national strategy or action plan developed under subsection (d).

(g) PROCEDURAL MATTERS.—

1           (1) FEDERAL ADVISORY COMMITTEE ACT.—The  
2       Council is not an advisory committee for purposes of  
3       the Federal Advisory Committee Act (5 U.S.C.  
4       App. 1.).

5           (2) OPEN MEETINGS.—The meetings of the  
6       Council shall be open to the public and timely public  
7       notice shall be provided in advance of each regular  
8       meeting of the Council.

9       (h) SUNSET.—The Council shall cease to exist on  
10     September 30, 1998.

11     **SEC. 7. REGIONAL ENVIRONMENTAL BUSINESS AND TECH-**  
12                     **NOLOGY COOPERATION CENTERS.**

13       (a) PURPOSE.—It is the purpose of this section to  
14     provide matching funds for the establishment of regional  
15     environmental business and technology cooperation cen-  
16     ters that will draw upon their own expertise to provide  
17     assistance, education, and training for United States and  
18     foreign companies and organizations engaged in providing  
19     and acquiring United States environmental technology  
20     (including marine biotechnology), goods, and services.

21       (b) REGIONAL ENVIRONMENTAL BUSINESS AND  
22     TECHNOLOGY COOPERATION CENTERS.—Eligible govern-  
23     ment and private sector organizations that are actively en-  
24     gaged in providing export assistance to small- and me-  
25     dium-sized environmental businesses and environmental

1 training to foreign nationals may apply to the Secretary,  
2 in such form and manner as the Secretary may prescribe,  
3 for designation as a Regional Environmental Business and  
4 Technology Cooperation Center. Eligible organizations in-  
5 clude State and local government agencies, small- and me-  
6 dium-sized businesses, and appropriate programs imple-  
7 mented by professional societies, worker organizations, in-  
8 dustrial organizations, for-profit and nonprofit organiza-  
9 tions, and institutions of higher education, including those  
10 designated as sea grant colleges under the National Sea  
11 Grant College Program Act (33 U.S.C. 1121 and follow-  
12 ing).

13 (c) STANDARDS FOR DESIGNATION OF CENTERS.—  
14 The Secretary shall establish standards for designating or-  
15 ganizations or programs described in subsection (b) as Re-  
16 gional Environmental Business and Technology Coopera-  
17 tion Centers. In establishing such standards, the Secretary  
18 shall give priority to—

19 (1) already existing centers and organizations  
20 which have demonstrated competence in the areas of  
21 environmental education and training and provision  
22 of export assistance to small- and medium-sized  
23 businesses; and

24 (2) any group of eligible organizations that  
25 would be designated as a single Regional Environ-

1       mental Business and Technology Cooperation Cen-  
2       ter.

3       (d) GRANTS.—

4           (1) IN GENERAL.—The Secretary may, subject  
5       to the availability of appropriations, make grants to  
6       Regional Environmental Business and Technology  
7       Cooperation Centers designated under subsection  
8       (b).

9           (2) USE OF GRANTS.—Grants awarded under  
10      paragraph (1) may be used by a Regional Environ-  
11      mental Business and Technology Cooperation  
12      Center—

13           (A) to identify the needs of specified for-  
14      eign countries and areas for United States envi-  
15      ronmental technology (including marine bio-  
16      technology), goods, and services;

17           (B) to provide technical assistance on ex-  
18      port development programs to small- and me-  
19      dium-sized businesses, in the region served by  
20      the Center, that have an interest in exporting  
21      such environmental technology, goods, and serv-  
22      ices;

23           (C) to conduct programs in the United  
24      States of training and education of foreign na-  
25      tionals in environmental management, coastal

1 zone management, sustainable development,  
2 marine pollution prevention and response, ma-  
3 rine biotechnology, and environmental business  
4 management; and

5 (D) to perform other services to promote  
6 the export of United States environmental tech-  
7 nology (including marine biotechnology), goods,  
8 and services.

9 (3) TERMS OF GRANTS.—Each grant under this  
10 subsection may be awarded for an initial period of  
11 not more than 3 years and may be renewed for one  
12 additional period of not more than 2 years. Each  
13 such grant may not at any time exceed 50 percent  
14 of the operating costs of the recipient Regional Envi-  
15 ronmental Business and Technology Cooperation  
16 Center and shall be matched by financial and  
17 in-kind contributions of the Center.

18 (4) LIMITATION IN NUMBER OF GRANTS.—The  
19 Secretary is authorized to make grants under this  
20 section to not more than 6 Regional Environmental  
21 Business and Technology Cooperation Centers.

22 **SEC. 8. SENIOR ENVIRONMENTAL SERVICE CORPS.**

23 The Peace Corps Act (22 U.S.C. 2501–2523) is  
24 amended by adding at the end the following:

1   **“SEC. 29. SENIOR ENVIRONMENTAL SERVICE CORPS.**

2       “(a) **ESTABLISHMENT OF SENIOR ENVIRONMENTAL**  
3 **SERVICE CORPS.**—There is established within the Peace  
4 Corps a division known as the ‘Senior Environmental  
5 Service Corps’.

6       “(b) **PURPOSE.**—The purpose of the Senior Environ-  
7 mental Service Corps is to provide volunteers with experi-  
8 ence in environmental management, environmental tech-  
9 nology (including marine biotechnology), sustainable de-  
10 velopment, coastal zone management, or marine pollution  
11 and prevention, to countries requesting volunteers with  
12 these skills.

13       “(c) **DUTIES AND RESPONSIBILITIES.**—Volunteers in  
14 the Senior Environmental Service Corps shall provide ad-  
15 vice to foreign governments, ministries, for-profit and non-  
16 profit organizations, and others in environmental manage-  
17 ment, strategies, and practices.

18       “(d) **TERMS AND CONDITIONS OF SERVICE.**—The  
19 President shall enroll volunteers in the Senior Environ-  
20 mental Service Corps in the same manner and under the  
21 same terms and conditions of service as other volunteers  
22 are enrolled under section 5 of this Act, except that volun-  
23 teers in the Senior Environmental Service Corps may be  
24 provided with stipends sufficient to enable them to fulfill  
25 the functions described in subsection (c) of this section.”.



1 **SEC. 9. AMERICAN BUSINESS CENTERS.**

2 (a) **ESTABLISHMENT.**—The Secretary is authorized  
3 and encouraged to establish American Business Centers,  
4 including Environmental Business Centers, in such coun-  
5 tries that the Secretary determines offer promising new  
6 market possibilities for the export of United States envi-  
7 ronmental technology (including marine biotechnology),  
8 goods and services. To the maximum extent practicable,  
9 the Secretary shall use the private sector to establish such  
10 Centers.

11 (b) **POLICY GUIDANCE.**—To the extent consistent  
12 with the policy and purposes of this Act, the Secretary  
13 shall comply with the directives set forth in paragraphs  
14 (1), (2), (3), (4), and (6) of section 301(c) of the Freedom  
15 Support Act of 1992 (22 U.S.C. 5821) in establishing  
16 American Business Centers and Environmental Business  
17 Centers under this section.

18 **SEC. 10. AUTHORIZATION OF APPROPRIATIONS.**

19 There are authorized to be appropriated—

20 (1) to the Secretary of Commerce—

21 (A) \$4,000,000 for each of fiscal years  
22 1994, 1995, 1996, 1997, and 1998, to carry  
23 out sections 5, 6, and 9; and

24 (B) \$6,000,000 for each of fiscal years  
25 1994, 1995, 1996, 1997, and 1998, to carry  
26 out section 7; and

1           (2) to the Director of the Peace Corps  
2       \$1,500,000 for each of fiscal years 1994, 1995,  
3       1996, 1997, and 1998 to carry out section 8.

4 Sums appropriated pursuant to paragraph (2) shall re-  
5 main available for 2 fiscal years.

6 **SEC. 11. DEFINITIONS.**

7       As used in this Act—

8           (1) the term “export promotion program”  
9       means any activity of the Federal Government de-  
10      signed to stimulate or assist United States busi-  
11      nesses in marketing their goods and services, includ-  
12      ing environmental technology, abroad;

13          (2) the term “Secretary” means the Secretary  
14      of Commerce, and

15          (3) the term “State” means each of the several  
16      States, the District of Columbia, and any common-  
17      wealth, territory, or possession of the United States.

○

Statement by Jonathan Sallet  
 Assistant to the Secretary &  
 Director, Office of Policy and Strategic Planning  
 Office of the Secretary  
 U.S. Department of Commerce  
 Before the House Subcommittee on Environment and Natural  
 Resources  
 Committee on Merchant Marine and Fisheries

May 25, 1993

Good Morning. I am very pleased to represent the Secretary of Commerce in testifying on the National Environmental Trade Development Act of 1993. We believe the intent of this bill -- to develop a national strategy to promote U.S. exports of environmental products, services, and technologies -- is essential to creating new jobs domestically and helping other countries to meet their most basic needs to provide clean air and water to their citizens. Mr. Chairman, as you are aware, the President has placed a high priority on developing such an initiative as outlined in H.R. 2112 and we share your enthusiasm and effort to move ahead to support the U.S. environmental industry and carry out the Administration's goals.

The Global Market for Environmental Technologies

We see an enormous potential for exports of U.S. environmental technologies. The global market, as cited in H.R. 2112 and other independent studies, is enormous and may surpass the aerospace industry in dollar terms and employment by the year 2000. With a market potential ranging from \$300 billion to \$500 billion for environmental products, services, and technologies, we cannot afford to ignore the possibilities for job creation, enhanced technology development and commercialization, and our major role in helping other countries protect their environment. Developing countries will probably see the largest growth rates although their absolute numbers will be small in comparison to those for industrialized countries. Mexico is, of course, a country where tremendous opportunities exist and where many U.S. companies have established a strong presence. Other nations in Latin America such as Brazil and Chile also offer great potential.

Mr. Chairman, about a month ago, shortly after Earth Day, I gave a speech before the Environmental Business Council in Boston. While I was there I met a woman, Joan Gardner, President of Applied Geographics, Inc., a small geographic information systems (GIS) firm in Massachusetts. Ms. Gardner related to me the enormous opportunities for companies such as hers in Latin America. One of her firm's recent successes is a joint venture contract she won in Mexico City where her firm will locate and map manholes, sewer and water lines in 5 of 16 delegations or

neighborhoods in the city. This work is especially important because in Mexico, the government can identify only 30 percent of the total water supplied to consumers.

A GIS is critical to Mexican federal and local governments because this system identifies where water is being consumed, by whom, and aids in determining what kind of water treatment methodology is to be used to provide either water acceptable for industrial applications or water for human consumption. It is also an excellent tool to identify the location of sewer lines and as a means for identifying neighborhoods where there are no water or sewer hookups. The GIS is essential to identifying water users and potential sources of leakages in municipal water supply systems and in determining what kind of water management program should be designed to meet national and local needs. Applied Geographics is doing similar work in Sao Paulo, Brazil.

In Asia, there are also great possibilities for U.S. industry. For some markets such as China, Indonesia, Taiwan and Thailand the potential is great. However to convert this potential to U.S. exports much needs to be done. We must assist these countries in establishing national environmental protection programs. This is where cooperation with agencies such as the Environmental Protection Agency (EPA) and the Department of Energy (DOE) is essential. The same is true in the Newly Independent States and central Europe, two other regions with long-term potential but which pose difficult challenges for U.S. exporters in the near term.

#### Administration's Environmental Strategic Plan

This Administration is deeply committed to the development of policies to protect the environment, promote economic growth and create high-skill, high-wage jobs. In the first weeks of his Administration, President Clinton named Vice President Gore to serve as the Administration's principal advisor on environmental policy.

To assist the Vice President in this role, the President in his Earth Day speech directed Secretary Brown to spearhead an interagency strategic plan to improve the competitiveness and increase exports of U.S. environmental technologies. The Department of Commerce through the International Trade Administration, National Oceanic and Atmospheric Administration (NOAA), and the Technology Administration is ideally suited for this task. We are carrying out this directive energetically within Commerce and in partnership with the EPA, DOE, the Export-Import Bank. We also are receiving strong support for this effort from the White House, especially Kathleen McGinty, director of the Office of Environmental Policy and Dr. John H. Gibbons, Director of the Office of Science and Technology Policy. Once developed, the Congressionally-mandated Trade Promotion

Coordinating Committee, chaired by Secretary Brown, will be the principal mechanism to oversee implementation of the strategic plan.

#### Commerce Environmental Technology Export Promotion

As a first step, the Secretary is integrating all of the Department's export promotion, technology commercialization, and science resources to carry out the President's vision. This strategic integration will build on activities already underway such as the National Environmental Technologies Trade Initiative (NETTI). A cornerstone of the NETTI is the development of a strong public/private partnership, coupling federal resources with private sector organizations whose expertise in the environmental arena is widely sought around the world. These groups include non-profit corporations, educational and training institutes, national industry associations and professional societies, and regional environmental business associations. I have attached a fact sheet more fully describing the NETTI.

As the lead player in implementing the Clinton Administration's Technology Plan, the Department is tasked with increasing the competitiveness of the environmental industry. Particularly important is the commercialization of new technologies. Two Commerce programs -- Manufacturing Technology Centers and the State Technology Extension Program administered by the National Institute of Standards and Technology -- are instrumental in this effort.

The Manufacturing Technology Centers (MTCs) program has formed linkages with other federal agencies to provide services and assure coordination, including EPA; Department of Labor; Small Business Administration (for loan guarantees); Department of Energy and its major laboratories; and the Department of Defense and its laboratories and centers of excellence. The MTCs work directly with small firms; both on-site and in central demonstration facilities to improve their competitiveness and the number and quality of jobs they provide. This program can easily be adapted to incorporate elements of the Department's strategic environmental initiative. NIST has taken the approach of building on existing strengths and resources, coordinating carefully, and avoiding duplication of effort.

Another NIST effort, the State Technology Extension Program, helps states plan and develop industrial extension infrastructure. In addition to funding, the program provides technical assistance and organizes regional activities that help to coordinate various state-based activities. The STEP program has worked with a total of 34 states to date, counting both grant recipients and states which have participated in regionally-based activities sponsored by STEP.

A logical extension of this program would be the use and interaction of STEP programs with the International Trade Administration's district offices to work together to educate and train small to medium-sized companies on environmental technology opportunities overseas and to assist in deploying environmental technologies in a commercial environment.

Secretary Brown, in testimony before the Senate Commerce Committee and the House Science Committee on the proposed National Competitiveness Act, supported the idea of developing a "one-stop shopping" network of manufacturing extension centers to serve many of the 350,000 small and medium-sized manufacturers. As I have said, many entrepreneurial firms in the environmental sector tend to fall in this category and would benefit from MTCs modified to include environmental technology centers.

The present NIST MTCs and STEP-supported activities have begun to build a base of experience helping small companies apply technological solutions to their needs for environmentally-conscious manufacturing. Expansion of the MTC program would greatly enhance the Administration's environmental initiative and meet the needs specified in the National Environmental Trade Development Act of 1993.

The National Oceanic and Atmospheric Administration's (NOAA) research and monitoring programs also will contribute significantly to the President's environmental technologies export initiative. NOAA's scientific research demonstrates to foreign nations and corporations the existence of environmental problems by identifying the effects of their actions on Earth systems. NOAA's scientific programs demonstrate that these problems can be rationally addressed, thereby giving the confidence to proceed with sensible, cost-effective remediation and prevention programs. Further, NOAA's scientific capabilities provide the world with sophisticated tools for use in attaining sustainable development. As a result, NOAA helps generate a demand in foreign markets for U.S. environmental technology.

In response to the Department's new strategy to expand U.S. markets and exports by focusing on the development of innovative environmental technology, NOAA and NIST are presently developing collaborative projects as part of their FY95 budget initiatives that will form better linkages to and partnerships with private industries, both domestic and international. These projects will address already identified problems in environmental hazards mitigation such as wind engineering requirements and standards for new building design and the use of marine biotechnology in pollution remediation. In addition, the establishment of a standards and calibration facility for marine instrumentation exposed to often hazardous and destructive environments is being negotiated.

The International Trade Administration, as the principal Commerce agency responsible for export promotion, identifies opportunities for U.S. environmental technologies in existing and emerging foreign markets. We use a number of techniques to help U.S. industry capitalize on these opportunities. These include the more traditional market promotion techniques -- trade missions, trade exhibitions, seminars/conferences -- and, under the NETTI, combine technical/educational seminars with a business-to-business forum designed to match U.S. environmental technology suppliers with foreign customers.

The Department has organized, sponsored, and led more than thirty environmental trade events to Eastern Europe, Latin America, Southeast Asia, and the Pacific Rim. Participants were, for the most part, small to medium-sized environmental companies where we have seen the greatest success in new jobs creation, technology innovation, and creativity. These firms tend to be more entrepreneurial and risk takers. Their CEOs are to be admired because of their willingness to compete with larger, more sophisticated Japanese and German companies who have access to resources far greater and support more deeply rooted than found in the United States. Elements of this bill would give these companies a helping hand, in a coordinated federal effort, to compete in a lucrative and risky global environment.

By integrating these three Commerce units, we will maximize our ability to aid the U.S. environmental industry. It is our hope that with this kind of federal assistance, U.S. environmental technology firms will be able to take advantage of emerging markets in the developing world and to build upon their comparative advantage in technological innovation.

#### Federal Efforts to Promote Environmental Technologies

As I have already noted, we believe, as does the President, that we can only succeed in our goal of expanding exports of environment technologies if there is an integrated effort across all agencies. Critical to this effort is the U.S. Environmental Protection Agency. In order to sell U.S. goods and services abroad, there must be markets and a demand for our products. Since many of most promising markets are in developing countries, a great deal of education and training is necessary. And, most importantly, we need to ensure that these countries adopt environmental standards that provide for a cleaner, healthier environment and give U.S. firms sales opportunities. Other countries have been busy promoting standards that favor their own companies. EPA is essential to this effort -- providing expert advice on technical assistance, regulatory enforcement, technology development and certification through its

laboratories. Internationally, EPA assists in building the institutions necessary to implement a national environmental protection program.

Other federal agencies including the Export-Import Bank and the Overseas Private Investment Corporation administer various financial programs that are critical to sustaining an ambitious environmental initiative identified in your bill. These agencies along with the U.S. Agency for International Development, and the Trade and Development Agency are critical to developing the one-stop shop mentioned in the bill and providing the financial support to identify projects in foreign countries, complete the feasibility studies, and finance economically viable, environmental control and remediation projects.

#### Analysis of Legislation

The broad goals of the bill to foster increased U.S. exports of environmental technologies are consistent with the President's policy and with the Department's ongoing efforts to refine interagency efforts to achieve his objectives. Mr. Chairman, the Department is in the process of formulating a long-range strategic plan for the environmental technology exports at the direction of the President and we expect to have the plan ready by the end of September. You can be certain that our strategic planning process will carefully consider each of the initiatives included in H.R. 2112. It is important to emphasize that our purpose is the same as yours -- to take advantage of the enormous global market opportunities by expanding U.S. environmental industry exports.

We would prefer to develop our strategic plan and consult with industry closely before determining what specific new assistance programs we should undertake. We agree with the Committee that industry must play an important role in developing an appropriate strategy to assist environmental companies in foreign markets. We believe, however, that industry should be consulted before any program is determined and that all needs be examined and weighed in light of their importance to helping U.S. industry succeed against its competition. Programs should be evaluated on a national basis and consistent with the specific technologies where the United States has a demonstrable and clear comparative advantage. We must find markets in which we excel, such as geographic information systems (GIS), bioremediation, and newly developed industrial waste water treatment systems that use waste heat, and apply our combined resources (government and industry) to accomplish our goals.

The bill also requires the President to establish an Environmental Trade Promotion Council. As you know, we are now implementing creation of the Congressionally-mandated Trade Promotion Coordinating Committee environment working group, which



seems to us to serve a similar function. Further, in light of the President's goal of reducing the number of advisory committees, the Administration does not support the creation of a new committee. We, of course, agree with the Committee that industry participation is essential to formulating any sound, long-term strategic plan to assist the environmental sector and are committed to encouraging their participation.

In conclusion, Mr. Chairman, I wish to thank you for the opportunity to share with you the Department's views on the National Environmental Trade Development Act of 1993 and applaud your efforts to carry out the President's commitment to fostering the growth of U.S. environmental technology exports. We are encouraged by your legislation and believe it sends a helpful signal. I look forward to working closely with you to accomplish the Administration's goal to protect the environment, promote economic growth and create high-skill, high-wage jobs. Thank you.

## NATIONAL ENVIRONMENTAL TECHNOLOGIES TRADE INITIATIVE

The National Environmental Technologies Trade Initiative (NETTI), is a partnership between the National Oceanic and Atmospheric Administration, the International Trade Administration, the Export-Import Bank of the United States, and other federal agencies. The initiative's goals are to introduce practical solutions to environmental problems in countries with no substantive expertise in environmental control, abatement, and remediation. The initiative also intends to take advantage of the United States' leadership in environmental protection by promoting U.S. exports of environmental technologies, equipment, and services. This industry sector has very strong export potential because of its competitiveness, and, given the proper support, can achieve significant gains in emerging markets in Eastern Europe, Russia, Mexico, South America, and East Asia/Pacific.

The National Environmental Technologies Trade Initiative is clearly important to the government's effort to build a strong partnership with industry and to stimulate exports and economic growth. As was witnessed by the Senate Observer Group to the United Nations Conference on Environment and Development which was chaired by then-Senator Albert Gore, Jr., the United States lags behind our competitors (Japan and Germany) in fostering and promoting exports of environmental technologies to key markets. The Organization for Economic Cooperation and Development (OECD) published a study in February 1992 which projected the global market for environmental technologies to exceed \$300 billion by the year 2000. The report estimated that the environmental market will, by the century's end, overtake the aerospace industry in size, employment, and industry shipments. The environmental sector will be a critical issue for the Department based on Vice President Gore's well-known interest in the environment and his publicized view, enunciated after the Rio Summit, that the United States is far behind Japan and Germany in promoting technology transfer of environmental technologies, and his belief that more can be done. The NETTI is a direct outcome of the Rio Summit and the International Trade Administration's effort to foster environmental technologies' exports with an active international market development program.

The genesis of this initiative is found in the Rio Summit, the U.S. Pavilion at EcoBrasil '92 (a commercial exhibition in support of the Summit which was held in Sao Paulo, Brazil), and the International Trade Administration's continuing effort to expand market development assistance to the environmental industry sector. Since 1990, The International Trade Administration through its line industry sector group, Basic Industries (and its predecessor, Capital Goods and International Construction), has organized and led trade and investment missions to Eastern Europe (Hungary, Czechoslovakia, Romania, Bulgaria, Poland, and the former East Germany (total of 6), East Asia/Pacific, Mexico, France, and Italy. It has also held commercial trade fairs in Mexico City (2), and Korea (2). With the U.S. & Foreign Commercial Service's support, more than thirty

successful trade events have been held in the environmental sector since 1990.

Unlike the traditional methods the Department has used to encourage U.S. private sector interest and participation in developing overseas business, the NETTI will introduce a technical assistance/educational component based around a two-day conference program modeled on a seminar held in Izmir, Turkey last August. Central to the success of the Izmir conference (which was held in conjunction with the annual Izmir International Fair), was the organizational support offered by a nongovernmental organization, the Turkish-American Friendship Council.

The Department will work with U.S. NGOs to broaden private sector participation in the NETTI and to fulfill its commitment to a strong public-private partnership in the environmental industry sector.

Secretary Brown has made the NETTI a key component of the Department's initiative to expand U.S. exports of environmental technologies, products, and services. A press release updating the NETTI's progress will be released shortly by the Office of the Secretary.

Testimony of

**ALAN D. HECHT  
ACTING ASSISTANT ADMINISTRATOR  
OFFICE OF INTERNATIONAL ACTIVITIES  
U.S. ENVIRONMENTAL PROTECTION AGENCY**

Before the

**SUBCOMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES  
COMMITTEE ON MERCHANT MARINE AND FISHERIES  
THE U.S. HOUSE OF REPRESENTATIVES**

May 25, 1993

Thank you, Mr. Chairman, and good morning, ladies and gentlemen. It is a pleasure to be here today to testify on the National Environmental Trade Development Act of 1993.

EPA strongly supports the development of a national strategy, led by the Department of Commerce and involving all relevant Federal agencies, to promote greater dissemination of U.S. environmental technologies and services in solving international environmental problems. EPA suggested some preliminary ideas for such a strategy in our December 1992 report, *Global Markets for Environmental Technology: Defining a More Active Role for EPA within a Broader U.S. Government Strategy*. More recently, President Clinton directed the Department of Commerce, working closely with EPA and the Department of Energy, to develop a strategy to increase exports of U.S. environmental technologies and to improve our competitiveness in the growing market for environmentally sound products and services. A proposal for a new Environmental Technology Initiative is also included in the President's budget request for FY 1994.

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EPA was pleased with the recent reconstitution of the Trade Promotion Coordinating Committee, chaired by Secretary of Commerce Ron Brown, and the establishment of its Environmental Trade Working Group. Drawing on EPA's comprehensive technology innovation and international technical assistance and capacity-building programs, we believe that the Agency has an important role to play within overall U.S. Government efforts. To that end, we look forward to working with the Department of Commerce and other Federal agencies in responding to the President's Earth Day directive.

My testimony today will include: (1) a brief overview of the growing global market for environmental technologies, (2) a summary of ongoing Administration initiatives on environmental technology innovation and dissemination, and (3) a brief description of EPA's role within this effort. I will conclude with some general principles to guide the Subcommittee in further developing this legislation.

### **The Growing Global Market for Environmental Goods and Services**

In 1992, an Organisation for Economic Cooperation and Development (OECD) report projected the global market for environmental technologies to reach nearly \$300 billion by the year 2000. Other estimates are even higher, with the Environmental Business Journal and the Environmental Business Council of the United States projecting that the market could reach \$400 billion by the year 1996.

The unprecedented growth in this global market is believed to result from a number of factors. First, as countries around the world seek to reduce the risks and costs imposed by pollution, governments are enacting stringent environmental regulations and committing the resources necessary to enforce them. Second, companies themselves are recognizing that cleaner manufacturing processes not only mitigate waste but heighten cost-savings and competitiveness. As a result, industry increasingly has been adopting *voluntarily* cleaner technologies, and new market opportunities have developed. Third, non-governmental and multilateral lending and development organizations are insisting that protection of the environment pre-condition their assistance and lending activities. Together, these factors offer U.S. firms an unprecedented opportunity to meet new and burgeoning international needs.

Looking at the industry from another angle, in 1991, revenues from the U.S. "envirotech" industry accounted for nearly a million U.S. jobs; that number is projected to jump to over one and one-quarter million by 1996. According to an *Environmental Business Journal* estimate, if government and business develop a cohesive program to help U.S. firms capitalize on international markets, by 1997 this industry could support over one and one-half million jobs.

The international market for environmental goods and services is currently dominated by demand for "end-of-pipe" pollution control equipment. The OECD projects that the

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markets for both pollution control equipment and services will increase steadily through the end of the century, with demand for equipment projected to grow at 5% per annum. The demand for services is expected to grow even faster as pollution control technologies are more fully integrated into industrial products and processes. In response to these bright prospects, the United States and a number of other countries have begun to position themselves to take advantage of the lucrative business opportunities.

The U.S. has long been a leader in providing environmental protection products and services at home. Our aggressiveness in setting and enforcing environmental standards established domestic environmental goods and services firms as front runners early on. However, as other nations have adopted and enforced stronger laws over time -- particularly laws utilizing quality standards and laws that emphasize preventive, rather than end-of-pipe, solutions -- overseas environmental firms have also become very competitive. Japan, for example, has had strict emissions standards in place since the early 1970s, and is generally considered the world leader in air pollution control technologies. The same can be said for Germany and water pollution control technologies. While no comprehensive, technology-specific evaluation of U.S. strengths has yet been issued, U.S. firms have been identified as market leaders in waste technologies and as being well-positioned in general environmental services.



## **U.S. Technology Innovation and International Dissemination Programs**

In addressing the wide range of environmental problems confronting the United States, the Administration has identified the need for government to play a partnering and leadership role -- both domestically and internationally -- in helping to encourage bringing environmental technologies from the entrepreneur's garage to the global market. Domestically, it is essential that government help promote a bridge between laboratory and full-scale commercialization. Internationally, it is necessary for us to work with other governments and international organizations in building the environmental infrastructures upon which further environmental progress depends. Supplemented by U.S. technical assistance and capacity-building programs, U.S. technologies and services can play a critical role in meeting international environmental needs.

As you know, this Administration has acted swiftly to propose an environmental technology program that will stimulate investments in innovation and coordinate environmental technology efforts throughout the Federal government. The Administration has, for example, proposed a \$36 million Environmental Technology Initiative in the Fiscal Year 1994 budget now before Congress. The Administration has established a technology policy initiative, under the Vice President's leadership, which will be coordinated jointly by the White House Office of Science and Technology Policy and the National Economic Council.

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Secretary of Commerce Ron Brown has reconstituted the Trade Promotion Coordinating Committee, in accordance with the Export Enhancement Act of 1992, to mobilize and integrate overall U.S. trade and export promotion activities, and the Administration will soon be convening the first meeting of an Environmental Trade Working Group. Finally, in the President's Earth Day speech of April 21, 1993, President Clinton directed EPA and the Departments of Commerce and Energy to "...create a strategic plan to give our companies the trade development, promotional efforts, and technical assistance they need to turn these advances into jobs here in America, as well as to help promote a better environment." A multi-agency *ad hoc* working group chaired by Kathy Sullivan, chief scientist at the National Oceanic and Atmospheric Administration (NOAA), is already working on the plan.

#### **EPA's Role Within Overall U.S. Government Efforts**

EPA has a critical role to play within overall U.S. technology cooperation and export assistance efforts. With respect to the supply side, for example, EPA is forging partnerships with other Federal agencies and the private sector in facilitating technological innovation. This cooperation includes the dissemination of credible information, the improvement of EPA and State regulatory, permitting, and enforcement programs, and the funding of innovative technology programs.

EPA and other Federal agencies have worked successfully with industry in implementing the provisions of the Federal Technology Transfer Act (FTTA). The Agency has instituted a Design for the Environment Program in which EPA works collaboratively with industry to identify process and raw material modifications that can prevent the generation of pollutants.

On the demand side, EPA and the Agency for International Development are working closely with other governments and international organizations in building the environmental infrastructures upon which further international environmental progress depends. Under the U.S.-Asia Environmental Partnership, the Support for Eastern European Democracy Act (SEED), the Freedom Support Act, the AID-EPA Environmental Pollution Prevention Project (EP3), and other programs, EPA is engaged in a comprehensive effort to strengthen or build environmental institutions and capabilities throughout the developing world. In addition to serving U.S. environmental objectives, such programs help enhance the demand for U.S. environmental technologies and expertise.

EPA was instrumental in establishing the U.S. Environmental Training Institute (U.S. ETI), a partnership with the private sector, to introduce foreign officials to U.S. environmental technologies and services. EPA and Commerce also collaborated in the first-time publication this month of the Green Pages. As a stand-alone version and as an environmental supplement to the Department of Commerce's The Export Yellow Pages, this

brochure lists over 1,000 U.S. companies eager to sell their products and services overseas.

EPA, Commerce, and the Trade and Development Agency recently co-sponsored a "reverse" trade mission for Brazilian officials to determine how U.S. companies can play a role in cleaning up the Tiete River in Sao Paulo, Brazil. Originally initiated through EPA's technical assistance program with Brazil, this project allowed Brazilian industry and political leaders to visit U.S. cities that have enacted similar river clean-up programs and to view first-hand the successful application of U.S. technology. The Governor of Sao Paulo has subsequently asked EPA to play an active role in overseeing follow-up to the project, thereby laying the foundation for future environmental collaboration.

EPA's cooperative programs with Mexico provides an excellent example of the Agency's environmental programs in action, as well as their potential benefits for U.S. trade and export programs. In 1991, the Government of Mexico allocated \$4.6 billion expenditures, loans, and credits to address environmental concerns. This represents a remarkable opportunity for U.S. suppliers, who already provide over 45% of Mexico's environmental technology imports.

EPA has been working closely with the Government of Mexico in solving a wide range of environmental problems both along the border and within Mexico City. The Border Plan, now in its first stage has helped lay the groundwork for a sustainable environmental

relationship between the two countries. The broader North American Free Trade Agreement (NAFTA) should only enhance this relationship.

EPA has, for example, initiated a personnel exchange program with Mexico under which EPA technical staff provide direct assistance to the Mexican Secretariat of Social Development (SEDESOL), as well as to Mexico City's Commission for Pollution Prevention and Control. Through this assistance, EPA is supporting the Trade and Development Agency efforts to promote greater access for U.S. firms to the growing hazardous waste management market in Mexico City. EPA has also developed, again in cooperation with the Mexican government, a bi-lingual pollution prevention guide for the maquiladora industry along the border, with an emphasis on alternative technologies. Coupled with The Green Pages, described earlier, this guide will serve as a useful mechanism for enhancing market access to this significant market south of the border.

All of these efforts require active cooperation with other Federal agencies and outside organizations. In this regard, EPA is forging partnerships with the Department of Commerce and other Federal agencies. In response to the President's Earth Day directive, for example, work is already underway to catalog existing Federal environmental technology programs, with EPA particularly involved in inter-agency workgroups on small and growing businesses, infrastructure, and broader technology issues. We also look forward to playing a critical role on the Trade Promotion Coordinating Committee and its environmental sub-group.

**EPA's Comments on the National Environmental Trade Development Act of 1993**

From the perspective of EPA's experience and unique relationship to environmental technology issues, I would like to offer four basic principles to guide the Subcommittee as you consider this important issue.

- (1) U.S. suppliers of environmental technologies and services can play a critical role in solving international environmental problems. Accordingly, U.S. technology innovation and diffusion programs should focus not only on the development and use of environmental technologies within the United States, but also on their potential and real applications internationally. Technology innovation programs improve the competitiveness of U.S. suppliers. International technical assistance and capacity-building programs enhance the demand.
- (2) The U.S. Government can play a catalytic role, but it cannot and should not substitute for the dynamism, creativity and resources of the private sector. To that end, drawing on a number of successful models already underway, Federal agencies should continue to foster greater partnerships with outside organizations and the private sector in facilitating the dissemination of environmental technologies abroad.

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- (3) The U.S. Government must foster greater partnerships among the wide range of Federal agencies already involved in the Government's technology innovation and diffusion programs. Led by the Department of Commerce and drawing on the comparative advantage of each Department or Agency, such a coordinated program will help achieve U.S. objectives on trade, competitiveness and environmental protection.
- (4) The U.S. Government must eliminate informational, regulatory and other barriers to technology innovation. International technical assistance and capacity-building programs should focus on information dissemination and education and training; the establishment of environmental regulations and standards; the development of environmental monitoring and enforcement capabilities; and the application of pollution prevention, risk management, and other environmental management techniques.

We believe these principles can help set the stage for a more targeted and integrated U.S. government approach.

I would like to stress the need to provide the Administration with as much flexibility as possible in achieving these goals. Legislation that locks in bureaucratic structures may prevent the Administration from responding effectively to new challenges and opportunities. For instance, the creation of the Environmental Trade Promotion Council in legislation and

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specifying its structure could complicate Administration efforts already underway in this area. I hope that we can work together to define our common goals without limiting our options for achieving those goals.

With that, Mr. Chairman, I conclude my remarks. I would like to thank you again for the opportunity to present EPA's views at their hearing, and would be glad to answer any questions you may have.



TESTIMONY OF  
DONALD L. CONNORS, ESQ.  
CHAIRMAN, ENVIRONMENTAL BUSINESS COUNCIL, INC.

BEFORE THE  
SUBCOMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES  
U.S. HOUSE COMMITTEE ON MERCHANT MARINE AND FISHERIES

MAY 25, 1993

TESTIMONY OF  
DONALD L. CONNORS, ESQ.  
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BEFORE THE

SUBCOMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES  
U.S. HOUSE COMMITTEE ON MERCHANT MARINE AND FISHERIES

MAY 25, 1993

Thank you, Mr. Chairman, and members of the Subcommittee, for inviting me and the Environmental Business Council (EBC) to testify again on how the federal and state governments, private industry, universities, and public organizations can cooperate to increase the export of U.S. environmental technologies, products, and services and to improve the world's capacity to manage its resources for sustainable use. Your first hearing on these topics, which you held on February 25, 1993, has had very substantial benefits already for those of us in the private sector. This hearing successfully focused attention both within and outside the Government on the tremendous opportunities I believe we have to create good jobs in the U.S. envirotech industry and to help other nations to better manage their resources through the export of environmental products and services. Since the first hearing, we have moved ahead with our

"Environmental Business Council of the United States." I am particularly pleased that you, Mr. Chairman, will take part in this Conference. We will also have the participation of other members of Congress and officials of the Clinton-Gore Administration, as well as prominent envirotech industry leaders, in the June meeting.

My testimony to day will focus almost exclusively upon H.R. 2112, the "National Environmental Trade Development Act of 1993," introduced by Chairman Studds, Representative Furse, Representative Olver, Representative Kennedy, and others on May 12, 1993. I have also attached to my written testimony an updated version of the strategy document we have produced in connection with the establishment of the national Environmental Business Council, and I ask that it be made a part of the record of this hearing.

Public-Private Sector Cooperation in Developing Environmental Exports

EBC strongly supports the goals embodied in H.R. 2112. As members of an organization (EBC) which seeks to take maximum advantage in the growing global market of the hard-won technological and managerial experience of the U.S. envirotech industry, we understand the need for greater cooperation and coordination between the industry and the government to achieve this goal. One of the important accomplishments of H.R. 2112 is that it will, for the first time, permit an active, full partnership between the government and the private sector in

carrying out the policy to develop the export of U.S. envirotech products and services (H.R.2112, section 6.).

I understand and applaud the efforts by the Congress that were made in the Export Enhancement Act of 1992 to create a special working group of federal officials to coordinate the actions of federal agencies to promote the export of environmental goods and services. This working group on environmental exports would function as a subgroup of the Trade Promotion Coordinating Committee which seeks to coordinate the actions of a dozen or so federal agencies with interests in export development across the board. I do not believe, however, that this subgroup is organized and functioning at this time.

But, despite the substantial improvements made by the Export Enhancement Act in U.S. trade policy, participation by the private sector in devising and maintaining an effective environmental trade development policy is not authorized by the Export Enhancement Act. H.R. 2112 effectively fills in this gap left by the Export Enhancement Act by establishing the Environmental Trade Promotion Council which will be composed of the Secretaries of Commerce and Energy, the Administrator of the Environmental Protection Agency, the Administrator of the Agency for International Development, the Director of the Trade and Development Agency, the President of the Export-Import Bank, the President of the Overseas Private Investment Corporation, and 12 non-federal members appointed by the President representing the envirotech industry, public organizations, and the states.

We strongly believe that inclusion of the private sector in the Environmental Trade Promotion Council will ensure that the primary goal of the Council to prepare an action plan to develop the export of environmental products and services will be met. Furthermore, the participation and oversight by private sector and other non-federal members of the Council will give the federal agencies significant and timely information and feedback on the success of federal initiatives to develop environmental exports -- feedback that is not available to them under the current law in a timely manner.

I want to stress that H.R. 2112 does not provide merely a consultative role for the private sector in devising and maintaining a program to promote the export of U.S. environmental products and services. H.R. 2112 involves the industry fundamentally in a close partnership with the federal government to achieve its goals. To this degree, H.R. 2112 may be said to open new ground in relations between the industry and federal agencies, and may be looked upon as a test case. We believe that we can make substantial improvements in the way the federal government currently conducts its programs to promote both economic development and responsible environmental management, by involving the private sector in export and environmental management decisionmaking as a working partner. We fully recognize that this change requires the industry to act cooperatively with government and to assume a new role and new responsibilities as well. This we are prepared to do.

We also believe that section 6 of H.R. 2112, which authorizes the Environmental Trade Promotion Council, is entirely consistent with the new policy of the Clinton-Gore Administration, as indicated by the President's Earth Day Address (April 21, 1993), in which he specifically identified the development of the export of U.S. environmental products and services as a major goal of his Administration. President Clinton clearly understands the linkage between the economic growth potential of promoting environmental exports and improvements in the capacity of nations to manage their resources and environment. In the view of this Administration, the United States and other nations can have both jobs and a healthy, sustainable environment. The President's decision that the Departments of Commerce and Energy and the EPA take the lead in this effort is in accord with the provisions of H.R. 2112, and I call your attention to sections 4 and 5 of the bill, that, in addition to section 6, place these agencies at the center of U.S. environmental trade promotion activities. Section 4 provides for a coordinating role for the White House Office of Environmental Policy and the National Economic Council to ensure that the environmental business action plan developed by the Environmental Trade Promotion Council is implemented by federal agencies. Section 5 clarifies the central role played by the Department of Commerce in implementing this action plan.

Regional Environmental Business and Technology Cooperation Centers

Section 7 of H.R. 2112 also authorizes the establishment of up to six regional environmental business and technology centers around the country. These centers, which will be initially supported, in part, by 50 percent federal matching funds, for a period of up to five years, will be a principal mechanism to coordinate the activities of regional envirotech industry, universities, and state agencies in programs to assist and train foreign companies, government officials, and staff in the use of U.S. environmental technologies, products, and services. The principal beneficiaries of the work conducted by the regional centers will be small and mid-sized environmental businesses and industry engaging in export of their products, goods, and services, often for the first time. We believe that, as these centers demonstrate their value, support for them should come from industry and other consumers of their services. Federal funding will cease after five years. Even during the five years of federal support, 50 percent of the funding to operate the centers must come from non-federal sources.

The centers should not be regarded as duplicating the services of federal agencies. It is clear, for example, that the centers will be able to sustain an integrated program of activities aimed at target countries and areas of the world in order (1) to develop the export of U.S. environmental products and services and (2) to improve the capacity of developing nations for environmental management. This kind of sustained effort and focus is not possible under current federal programs,

we believe.

Regional centers may assist in the identification of country or area needs for environmental technologies, goods, and services. They may provide technical assistance to small and mid-sized businesses within a region of the U.S. to meet these identified needs. They may, through a wide range of activities, including meetings, conferences, exchanges, and programs of technical training, establish long-term business, professional, and governmental relationships between foreign and U.S. companies, governmental officials, trade associations, universities, and research centers. The net result, we believe, will be the creation of substantial opportunities for the development of the export of U.S. environmental products and services over the long term.

I stress that the centers will be able to target countries and areas of opportunity and to devise integrated programs of assistance and training, with the full participation by the private sector in its programs. Finally, these centers will either prove their worth over the five year period they are authorized and be entirely supported with non-federal funds, or they will not survive. But, we think that H.R. 2112 wisely provides for an initial period of federal support for these regional centers to demonstrate their value.

#### The Senior Environmental Service Corps

The Senior Environmental Services Corps is a proposal whose time has come, in my opinion. We have more than two decades of



experience in developing environmental technologies and managing resources in the United States. We have made many mistakes, of course, and clearly we cannot claim that we have solved even our major environmental problems. But, we have also had many successes and we have learned much about environmental management. This knowledge should be made available to other nations.

We also have a corps of environmental specialists and managers who are highly trained and who are motivated by the spirit of altruism to serve humankind. I believe that we must simply provide the means for such individuals to serve in other countries, much like Peace Corps has done for the past 30 years.

The Senior Environmental Service Corps, however, is different from the typical Peace Corps program, in that the service and assistance would be provided at higher levels of government and business than is usually the case in Peace Corps programs. The rationale and need for this level of service is primarily to affect the formation of environmental policy and programs by providing highly experienced environmental professionals to assist government ministries, business, and public organizations in creating new programs of environmental and resource management.

Our assumption in supporting this new program within the Peace Corps is that the United States, after more than two decades of sustained environmental management, has created a large group of professionals, in the private sector as well as in

government and public organizations, who will be willing to devote a substantial period of service abroad in order to improve national programs of environmental management.

The modest costs of this program will, in my opinion, be substantially returned through the service that dedicated environmental professionals will provide to their host countries, companies, and organizations. I strongly urge you to support the creation of the Senior Environmental Service Corps.

That concludes my testimony with respect to H.R. 2112, Mr. Chairman. I will be happy to answer to provide additional information and to respond to your questions.

A STRATEGY TO PROMOTE AND PROVIDE  
LEADERSHIP FOR THE U.S. ENVIRONMENTAL  
INDUSTRY IN THE DOMESTIC AND GLOBAL MARKETPLACE

- DRAFT 9 -

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prepared by

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Western Governors' Association, Denver, Colorado  
Environmental Business Journal, San Diego, California  
and other business, governmental, and environmental organizations

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Environmental Business Council of the United States, Inc.

## I. EXECUTIVE SUMMARY

This is a proposal to launch the Environmental Business Council of the U.S. Inc. (EBC-US), a national trade association for the U.S. environmental industry. The proposal is in two parts: (1) a strategic analysis of the historic opportunity for tremendous economic growth which is now available to the industry and (2) a strategy for harnessing and building upon these historic forces (including important social, political, economic and scientific factors) through the catalyst of a national industry association. We have directed this proposal to leaders of U.S. environmental and energy corporations, government, and academic institutions; we seek your immediate active support and participation in launching the EBC-US at a by-invitation-only conference to be held on June 8 & 9, 1993 in Washington, D.C.

### Strategic Opportunities and Challenges for the U.S. Envirotech Industry

Events of the past two decades and the nascent policies of the Clinton Administration present a unique strategic opportunity for the U.S. envirotech industry to expand. Key factors behind this strategic opportunity include:

- The global market for environmental goods and services, currently estimated at \$200 billion, is estimated to grow to \$300 billion by the year 2000.
- An Industry analyst estimates that by 1997 the U.S. environmental industry will have created 312,000 new jobs based on increased marketshare of the global market, if

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an effective government-business partnership is implemented.

- The envirotech industry will, by most estimates, be one of the world's fastest growing industries over the next 20 years.
- Major cultural and social changes -- symbolized by events like the 1992 Earth Summit in Rio and the Montreal Protocol on Chlorofluorocarbons -- have moved environmental concerns from subcommittee status to the center of business strategic planning and political and governmental agendas.
- The lion's share of anticipated growth in the global environmental market will be in the international (non-U.S. market).
- U.S. firms have historically dominated the envirotech market but are currently losing market share to competitors in countries like Japan and Germany where pro-active business-government cooperation has long been a way of life.
- U.S. envirotech firms -- located in clusters across the U.S. in close association with universities, and responding to the most demanding government-imposed environmental regulations in the world -- have a unique competitive advantage according to the analysis of Professor Michael Porter of the Harvard Business School in his important book, The Competitive Advantage of Nations (1990).
- The Clinton Administration has identified the envirotech industry as a key engine for economic growth, both domestically and in the global marketplace. In his Earth Day speech on April 21, 1993 President Clinton directed the Secretary of Commerce, Ron Brown, to develop an interagency strategic plan to increase exports of U.S. environmental technologies.

However, the U.S. envirotech industry also faces a number of important challenges which must be overcome if it is to achieve its potential dominance and growth in the global marketplace. The historical dominance of U.S. envirotech firms is currently threatened by technological, political, and financing factors which impede its growth in the international marketplace.

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- U.S. firms are overwhelming domestically oriented, and are not experienced at selling in the international marketplace.
- Formal regulations and informal trade patterns restrict U.S. access to international markets.
- Financing for U.S. sales of environmental goods and services is often impossible to obtain, while foreign competitors frequently have attractive (often government-sponsored) financing.
- International purchasers of environmental goods and services are often seeking comprehensive programs and packages (including, for instance, education and training components). Joint venturing and other team arrangements responding to these customer needs requires trade association, governmental, or other coordinating assistance.
- Existing U.S. government programs supporting growth of the U.S. industry and the export of U.S. environmental goods and services are not well-coordinated and require a strong partnership with business to be truly effective.
- The U.S. envirotech industry is currently fragmented, and is either centered on specific industry sectors (e.g., The Water and Wastewater Equipment Manufacturers Association) or geographic areas (e.g., the California Environmental Technology Partnership).

## **A Strategy to Create Strong Leadership for the Envirotech Industry**

We propose a strategy which builds on these historic opportunities in order to overcome the challenges currently facing the industry and maintain the U.S. industry's dominant position in the new global marketplace over the next two decades. We believe that a national organization -- speaking with a central voice and working closely with both the Clinton Administration and with state government -- is essential to coordinating and effectively channeling the vigorous forces

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already at work in this area. The EBC-US will build upon the strengths and experiences of the regional and other envirotech associations, such as the New England regional Environmental Business Council, which have been organized across the U.S. in the past several years. Many of these organizations and other like organizations to be formed would eventually become local chapters of the EBC-US.

The Environmental Business Council of the United States, Inc. will provide leadership to foster the development of an internationally competitive U.S. envirotech industry. Key goals and functions of the EBC-US would include:

- Developing an effective business-government partnership at both the federal and state levels.
- Working with the Clinton Administration to improve existing U.S. trade support and environmental technology programs. President Clinton's environmental technology initiative, which adopts the analysis which EBC-US sponsors have developed, represents a unique opportunity for the industry to work effectively with government.
- Working with the Congress to enact legislation which is required to make the U.S. industry an effective competitor in the new global marketplace. EBC-US has been an important sponsor of the National Environmental Trade Development Act, legislation introduced in the Congress in May.
- Market development activities including trade missions, research information, and contacts.
- Developing access to effective sources of financing, both governmental and private.

We also propose to establish, as an affiliate of the EBC-US, a not-for-profit organization, to be called the International Environmental Business and Technology Institute, Inc., to engage

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in research, training and education, advising governments on environmental regulations and programs, and other activities in support of the EBC-US's mission. EPA has recently committed \$150,000 in funding for this Institute's projects, and other government and private organizations have expressed interest in providing financial support for the Institute.

The EBC-US will be launched at a June 8-9, 1993 conference in Washington, D.C., bringing together by invitation key representatives from industry, government, and academic and research institutions. Industry leaders who share our belief that the industry has a unique opportunity to expand and build on its historic position of dominance, but that this opportunity can be realized only by implementing a coherent and carefully thought-through strategy, are invited to join the EBC-US now as charter members and work with us to shape that strategy for endorsement at the June conference.

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## II. INTRODUCTION

This is a proposal directed to executives of environmental and energy companies, to academic institutions, and to governments. It proposes to launch a national trade association, with offices in Washington, DC, for the envirotech industry. This association has been given a working name of the Environmental Business Council of the U.S., Inc. (EBC-US).

This proposal analyzes the historic opportunity for the export of environmental goods and services over the next 20 years and describes a strategy for linking business initiatives and government programs through the catalyst of a national envirotech association. This strategy takes its force from a variety of powerful economic, political, and social trends currently at work in the U.S. and worldwide. It harnesses and directs existing federal and state governmental programs, proposed initiatives of the Clinton/Gore Administration, legislative proposals in the Congress, and the historic expertise of the U.S. envirotech industry to create an unprecedented opportunity for the industry to become a leader in the global marketplace for environmental goods and services, a marketplace which is projected to undergo tremendous growth over the next 20 years.

The U. S. envirotech industry includes companies that manufacture products or provide services in the environmental and energy areas, as well as educational and research institutions. It has for some time existed in relative obscurity. Yet, in the

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United States, there are around 60,000 envirotech companies concentrated in as many as 15 "clusters" throughout the country that, in 1991, had revenues of \$120 billion. We believe that the envirotech industry will have a critical and expanding role to play in the future in both protecting the environment and promoting economic growth.

The continuing development and adoption of less polluting and more efficient products, manufacturing processes and services is a critical strategy for accommodating, without irrevocably altering the planetary life support system, the doubling of global population and the fivefold increase in economic activity which has been projected by the mid-21st century. Industry analysts also project that the worldwide market for envirotech goods and services will grow by 51 percent, to \$408 billion, by 1996. The U.S.'s world-class universities, vigorous environmental regulations, sophisticated high technology manufacturing and environmental service companies, highly skilled labor force, and capable management all give us a significant competitive advantage in the industry. However, our dominant share of the global envirotech marketplace is slipping, and important opportunities are being missed. We must encourage environmental and energy technology innovation, improve its diffusion, and facilitate the export of environmental goods and services.

Events of the past decade have created a wave of interest and enthusiasm for the future of the envirotech industry. But

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real obstacles will have to be overcome if we are to be competitive in this new global marketplace. The Environmental Business Council of the United States, Inc. ("The U.S. EBC-US") which we have established in cooperation with The Western Governors Association, The California Environmental Technology Partnership, and other environmental and business organizations throughout the country, will work on behalf of the U.S. envirotech industry to meet these obstacles and provide a critical central and informed voice for the industry.

The EBC-US will help firms increase access to the international marketplace and to the purchasers of environmental goods and services both in the U.S. and abroad, thereby maximizing business development dollars. It will work in partnership with the Clinton-Gore Administration (which has already shown interest in this proposal), with the U.S. Congress, and with state governments to develop coherent and effective policies and programs to support the development of the envirotech industry. It will provide networking opportunities for firms to pursue joint ventures and other business development opportunities abroad as well as in the domestic market. It will provide the kind of serious market research and needs assessments which give businesses the information they need. It will work to increase access to official government financing, both bilateral and multilateral, in support of sales of environmental goods and services in the global marketplace. In short, by providing a central and sophisticated voice for the currently fragmented envirotech industry, a voice equal to those of the U.S.

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industries' competitors in the worldwide market, the EBC-US will aid the industry in building on its current dominance in the marketplace and maintaining its preeminent place over the next two decades.

In New England, the creation of the Environmental Business Council, Inc. ("New England EBC") in 1990 provided a forum for environmental businesses, academic institutions, and public agencies to collaborate in the promotion and development of business opportunities, both domestically and internationally. Across the country, similar organizations in California, Oregon, and in other areas have also created important opportunities for the industry. The success of this approach has been demonstrated consistently by the track record of members of the New England EBC in developing business in both the domestic and international marketplace. The experience of the New England EBC, as well as the other associations from around the country, will serve as the cornerstone and catalyst for development of the national envirotech association. We believe that a nationally coordinated program of advocacy for the envirotech industry will succeed in taking advantage of this unique opportunity to forge a partnership between the envirotech industry and government.

A more detailed analysis of the envirotech industry, the envirotech marketplace, and relevant growth factors, as well as the objectives, milestones, and resource requirements of the proposed national envirotech association, follows.

### III. STRATEGIC OPPORTUNITIES FOR THE U.S. ENVIROTECH INDUSTRY

Several developments have created a unique opportunity for the U.S. envirotech industry to expand, but there are obstacles to overcome first.

#### 1. The Global Environmental Market

According to a number of experts who track the envirotech industry, the current dominance of U.S. companies is giving way to competitive pressures from European as well as Japanese environmental companies as the global envirotech market develops.<sup>1</sup>

The global market for environmental goods and services is substantial, and is predicted to undergo tremendous growth in the next 20 years. According to studies prepared by The Organization for Economic Cooperation and Development (OECD) the size of the worldwide envirotech market in 1990 was estimated to be \$200 billion. OECD projects that growth of this market will reach \$300 billion by the year 2000, making environmental protection one of the world's fastest growing industries.<sup>2</sup> The Environmental Business Journal (EBJ), a newsletter that tracks

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<sup>1</sup> Charles Collins, "Europe Eyes Major Share in Global Environmental Market", Winslow Environmental News, Vol. 3, No.2 (November, 1992) Winslow Management Company, Boston, Massachusetts.

<sup>2</sup> Much of this industry is concentrated in the U.S., Germany and Japan, but it is now growing rapidly in other countries of the world.

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the U.S. industry, estimated the size of the 1991 worldwide envirotech market at \$270 billion, based on analysis of 12 environmental sectors. EBJ projects a 51 percent growth in that market, to \$408 billion, by 1996.

Grant Ferrier, the editor of EBJ, believes the U.S., with about 44 percent marketshare of the world envirotech market, is large but exhibiting the slower growth typical of a mature industry. He estimates U.S. share of this market will grow about seven percent annually until 1996, while environmental industries in other countries serving the global market, including Canada, Mexico, Latin America, Eastern Europe, and Southeast Asia, grow at double digit rates.

According to Ferrier's estimates, U.S. revenues of the U.S. envirotech industry accounted for 970,000 jobs in 1991, and will account for 280,000 additional jobs in 1996. Ferrier also estimates that in 1992 the U.S. marketshare of the international envirotech industry (outside of the U.S.) was 5%. He believes that this share could be increased to 15% with a comprehensive government-business program to develop this market. According to Ferrier's estimates, implementing such a program could create 312,000 new U.S. jobs in the envirotech industry by 1997.

Over the next five years, Ferrier estimates the U.S. share of the worldwide market will drop from 44 to 40 percent, while western Europe's share will rise from 30 to 32 percent. Japan, which Ferrier estimates had about 8% of the 1991 global

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envirotech market, is projected to remain approximately at that level through 1996.

Only a coordinated strategy for the envirotech industry will reverse this predicted decline in U.S. marketshare of the global market and capture the potential for the industry to grow in the international marketplace. We believe that a failure to act now may result in the loss of existing and future market share, such as the U.S. has experienced in the automobile, consumer electronics, machine tools, textiles and other once-powerful industries.

## 2. Long-term Market Trends

The global envirotech market is driven by a number of factors:

- Expanding population and economic activity which uses more resources and creates more pollution and waste;
- Increasing public awareness of environmental issues and demand for environmental quality;
- Business recognition that pro-active environmental management, pollution prevention, and energy efficiency are a basic element of business strategy.
- Heightened business concern about environmental liability, corporate image, and pressure from investors;<sup>3</sup>

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<sup>3</sup> See generally Stephen Schmidheiny's Changing Course, MIT Press, Cambridge, Mass., 1992; Bruce Smart, Beyond Compliance, a New Industry View of the Environment, World Resources Institute, 1992; Lester R. Brown, State of the World, 1993 (esp. chapters 9 and 10), World Watch Institute, W.W. Norton, 1993; Columbia Journal of World Business, Corporate Environmentalism, Fall/Winter 1992,

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- The linkage of trade and the environment, such as that occurring in the North American Free Trade Agreement (NAFTA);<sup>4</sup>
- Linkage of official development assistance (ODA) with export of U.S. envirotech goods and services.
- Future multilateral trade negotiations, such as the General Agreement on Tariffs and Trade (GATT); and
- International agreements, such as the Montreal Protocol for Chlorofluorocarbons (CFCs), those adopted at the Earth Summit in Rio in 1992 and others that will be adopted as the extent of global environmental problems is better understood.

The initiatives adopted at the Rio Summit are especially important for their impact on the global environmental marketplace. Six action points resulted from the Rio Summit, at which 172 nations were represented. These action points were:

- (1) to adopt Agenda 21, a comprehensive program for sustainable development;
- (2) to direct the United Nations to establish a Commission on Sustainable Development to oversee implementation of Agenda 21;
- (3) to adopt the Rio Declaration, a non-binding statement of 27 broad principles for guiding environmental policy;

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Columbia Business School, New York, New York, 1992; Joseph J. Romm, The Once and Future Superpower, William Morrow and Company Inc., New York 1992 (esp. Chapter 5, pp. 170-176).

<sup>4</sup> U.S. Congress, Office of Technology Assessment, Trade and Environment: Conflicts and Opportunities, OTA-BP-ITE-94 (Washington, DC: U.S. Government Printing Office, May 1992). See also Lally, Esty and Van Hoogotstratem Environmental Protection and International Trade: Toward Mutually Supportive Rules and Policies. Harvard Environmental Law Review, Vol. 16, 1992 No.2. For analysis of the gravity of the challenge facing the global environment, see Our Common Future, Report of the World Commission on Environment and Development, Oxford University Press, 1987; Senator Al Gore, Earth In The Balance, Houghton Mifflin Company, 1992; Shridath Ramphal, Our Country, The Planet, Lime Tree, 1992.



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- (4) to adopt a legally binding treaty to safeguard biological diversity and genetic resources;
- (5) to adopt a legally binding treaty on climate change; and
- (6) to adopt a statement of forest principles.

The Commission on Sustainable Development has been established by the UN (December, 1992) and 53 members have been elected to serve (February, 1993). The Commission's first meeting is scheduled for June, and will focus on ways in which an international environmental management system can be developed to implement Agenda 21.

Among the specific goals of Agenda 21 is the transfer of environmentally sound technology (set out in Chapter 34 of Agenda 21). Chapter 34 specifically recognizes that such technology transfer must be built on joint efforts by business and government, with the goal of building global capacity for sound environmental management ("capacity building") through education, training, and technology cooperation.

This mechanism for achieving the goals of Agenda 21 through global technology cooperation and capacity building, to be implemented by a partnership of private enterprise and government, offers the US envirotech industry an extraordinary opportunity to participate in and shape the new global environmental management structures and institutions which will emerge over the next decade. Donald L. Connors, EBC-US's president, is accredited to the Sustainable Development

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Commission and will be able to work with the Commission as it takes up its task of overseeing the implementation of Agenda 21.

Related to these developments are foreign policy analyses suggesting that the U.S. foreign aid program, which was historically cold war-based, be restructured to address global environmental and sustainable development needs. Such a program - which has been called the Sustainable Development Initiative - would also provide vigorous government assistance for the export of U.S. environmental goods and services.<sup>5</sup> The U.S. Congress, Office of Technology Assessment (OTA) is currently engaged in an assessment on trade and competitiveness implications of environmental policies for U.S. industry, and in connection with this assessment is preparing a background paper examining the increasing potential for linkages between Official Development Assistance (ODA) and environmental export promotion. A related OTA background paper, Trade and Environment: Conflicts and Opportunities, was issued in May, 1992.

Collectively, the Rio initiatives and the other factors set out above will, as initiatives and as they in fact are implemented, help shape the global business environment for the envirotech industry. These and other factors accelerate the demand for improved environmental management, which in turn creates the need for environmental goods, services, education,

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<sup>5</sup> James C. Clad and Roger D. Stone, New Mission for Foreign Aid, Foreign Affairs: America and the World 1992-1993; Volume 92, No. 1

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training, information and advice.

Over time, these forces and newer incentive-based regulatory programs will lead to new environmental regulations and a favorable climate for environmental investments will be created in many nations around the world. This will result in increased business for the U.S. envirotech industry if the necessary resources are mobilized so that the industry is able to (1) maintain and enhance its edge in many environmental technologies, and (2) identify and take advantage of the global opportunity that lies ahead for the sale of goods and services abroad. These business opportunities will also be realized by envirotech organizations establishing business-to-business relationships with decision makers from other nations.

Simply stated, economic opportunities will be created by the transfer of the experience and training and technology needed for sustainable development from those who have it to those who require it. The Rio Summit described this process as technology cooperation. It relies principally on private initiatives and depends in large measure on business-to-business relations between firms in the developed world with others in the developing world. This cooperation will be critically enhanced by support and cooperation from governments and other institutions, including multilateral lending agencies, like the World Bank and the regional development banks, that are engaged in various aspects of development work.

### 3. Competitive Advantage and the U.S. Envirotech Industry

Michael Porter of the Harvard Business School has identified clusters of competitive industries, such as the envirotech industry, as a critical feature of national and international economic competitiveness in his important book The Competitive Advantage of Nations.<sup>6</sup> In this five year study of ten leading trading nations, Professor Porter concludes that the traditional sources of competitiveness have been superseded by the changing nature of international competition. Globalization has allowed firms to obtain what Professor Porter calls factors (skilled workers, materials, and technology) in international markets or locate selective activities overseas to take advantage of them. He concludes that in a world of global competition, economies are specialized.

According to Professor Porter, what determines prosperity today is the potential of a region's industries and entire economy to continuously upgrade. This means relentless productivity improvement in existing industries, through improving products or increasingly sophisticated processes. This means moving into more advanced market segments that involve more sophisticated technology and/or command higher prices, and having the capacity to compete successfully in sophisticated new industries where productivity is higher.

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<sup>6</sup> Michael Porter, The Competitive Advantage of Nations, Free Press, New York, New York, 1990

Professor Porter outlines four broad attributes of a region (which he renders schematically as a diamond) that shape the environment in which its firms compete and enable consistent innovation and upgrading. These attributes, individually and as a system, critically influence the ability of competitive advantage to be created and sustained:

- **Factor Conditions:** The presence of highly specialized pools of skills, technology, and infrastructure tailored to the needs of particular business that are continually upgraded.
- **Related and Supporting Industries:** Capable local suppliers of those specialized inputs (such as components, machinery, and services) integral to innovation in the industry; competitive local companies in industries related by technology, skills, or customers
- **Demand Conditions:** The presence of sophisticated and demanding local customers who pressure firms to innovate and whose needs foreshadow needs elsewhere
- **Firm Strategy, Structure and Rivalry:** A local context that allows strategies and ways of organizing and managing that fosters innovation; individual and corporate goals that support sustained investment; vigorous competition among a group of local rivals.

### Clusters of Competitive Industries

The workings of these attributes, Professor Porter states, lead to the formation of clusters of nationally or internationally competitive industries. A cluster is a grouping of industries linked together through customer, supplier, or other relationships. Both manufacturing and service industries may be part of a cluster, and are often closely interconnected.

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Once a cluster forms, the industries which comprise it become mutually reinforcing. Aggressive rivalry in one industry spreads to other industries in the cluster through spin-offs or related diversification. Information flows freely, and innovation spreads rapidly through the relationships among customers and suppliers. Institutions such as colleges, universities, and public infrastructure adapt to cluster needs. Through a cumulative process that often occurs over a several decades, the state or nation becomes a unique repository of specialized expertise, technology, and institutions for competing in a given field.

Clusters of industries that compete nationally and internationally, then, are the driving force behind economic development in a state or nation. Their mutually reinforcing character energizes innovation, fosters upgrading, spawns new companies and new industries, and drives demand for local industries. While clusters are defined functionally, they are often found to be concentrated geographically within a nation. Figure 1 depicts some of the "clustering" of the U.S. envirotech industry.

#### **The role of Government in Economic Development**

Professor Porter outlines four fundamental roles for government in economic development. The first is to improve the quality and availability of the basic inputs that firms draw upon, such as human resources, technological infrastructure,

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physical infrastructure that applies to many industries, and capital.

A second role of government is to create rules, regulations, and incentives that encourage innovation and upgrading. Through regulations, tax policies, antitrust enforcement, and many other actions, government policies influence the climate in which firms compete.

A third government role is to build on and reinforce the formation of local clusters, both established and emerging. This leverages the investments of government and other institutions in building skills, research capabilities, and infrastructure, because they feed whole groups of firms and industries.

The final and most subtle role for government is to raise the sights of local firms, their managers, their other employees, and the region's citizens. Government leaders, with their public platforms, can help educate the public about the imperatives of international competition, highlight the challenges facing industry, and articulate an economic vision for the future. This sort of role for government -- signalling the future -- fosters economic upgrading.

### **The Role of the Private Sector in Economic Development**

Professor Porter believes that while government can help to create a favorable environment for competition, it is companies

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themselves that must ultimately achieve and sustain competitive advantage. To do so, they must recognize the central role of innovation and the uncomfortable fact that innovation grows out of pressure and challenge. Companies must sell to the most sophisticated and demanding buyers; seek out those buyers with the most difficult needs; establish norms that exceed the toughest regulatory hurdles or product standards; source from the most advanced suppliers; and, treat employees as permanent in order to stimulate upgrading of skills and productivity.

Another critical component of the private sector's role is to provide information and substantive inputs to government so that government can act effectively to influence cluster formation and economic development. Professor Porter argues that industry associations, ideally representing entire clusters, are a critical focal point for factor creation, information gathering, and communication with government. The functions of such a trade association go well beyond the traditional model, with its emphasis on lobbying, and instead involve a proactive partnership with government to support constant industry innovation and growth. These functions include:

- Research, including needs assessments, analysis of environmental laws and regulations, critical technologies, industry surveys, etc.
- Training programs, including sophisticated training initiatives as well as creating support for basic education.
- Proactive co-ordination with federal, state and local governments to identify industry needs and opportunities for government support and joint industry/government activities.



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- o Regional (i.e., Latin America) trade development ambassadors (without permanent trade mission offices).
- o Trade shows and focused trade missions as components of a carefully thought-through marketing plan.
- o Other marketing activities (advertising, literature, etc.)

While the strength of these clusters of competitive industries lies in their local setting, working effectively with the federal government requires a national organization. EBC-US will build on the strength of the clusters and their local centers of influence through the various regional chapters which will be chartered. At the same time, EBC-US, as a national voice for the industry, will be in a position to work with the Administration and the Congress to enhance the global competitiveness of the U.S. industry.

Another critical determinant of economic success and source of economic growth for a nation is having industries that compete internationally (and not just nationally) headquartered there. This is because the size and productivity of international industries determines, to a large part, the long-term growth prospects of purely national industries. Accordingly, international firms offer the greatest potential for long-term economic growth for the U.S. Their success in this endeavor depends upon their ability to compete against firms in the international marketplace. Thus, while the challenge is great, success and competition in the international markets has a profound impact on U.S. prospects for long-term economic growth.

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The U.S. envirotech industry is a paradigm example of clusters of nationally and internationally competitive industries which Professor Porter identifies as the driving force behind national economic development. Further, to the extent that U.S. envirotech companies can develop and compete in the global environmental market, they will tap the superior potential for economic growth that home-based international companies represent. Accordingly, the U.S. envirotech industry is a critical potential engine for U.S. economic development and job creation, as the Clinton-Gore Administration has recognized. However, to realize this potential, the industry must overcome the challenges which currently threaten its continued preeminence in this market. These challenges include: access to international markets, increasing technological competitiveness of other nations, and lack of co-ordination among envirotech clusters within the United States. We believe that creation of a partnership of the industry and federal and state governments is essential if we are to meet these challenges and the envirotech industry is to realize its potential. As Professor Porter's analysis indicates, there are essential roles to be played by both government and the private sector in economic development. A national envirotech association is critical to provide the leadership to secure the government and private sector cooperation needed to take advantage of this global market opportunity.

#### IV. CHALLENGES FACING THE U.S. ENVIROTECH INDUSTRY

## 1. Access to International Markets

Many U.S. envirotech firms lack both experience and established customer bases in the international market. On the other hand, such firms often possess the environmental technology, the expertise, and the scientific and management skills needed abroad. As we have pointed out, U.S. pre-eminence in the envirotech industry is based on more than 20 years national experience under the most demanding environmental regulations in the world. Further, U.S. spending on environmental goods and services is estimated to be between 2% and 3% of GDP, a figure which no other nation approaches.

This lack of experience presents obstacles to American firms seeking to do business in the international marketplace. Some of these obstacles are:

- Many U.S. firms are reluctant to consider export prospects and voluntarily exclude themselves from new markets because they perceive exporting to be too risky, complicated or not profitable.<sup>7</sup>
- International firms and governments who might be customers are subject to different environmental laws and regulations, as well as different technical standards than those prevailing in the United States (For instance, the ISO 9000 standard adopted by the EC is also being adopted by a number of other non-EC nations. Many U.S. companies are unfamiliar with this standard -- as well as other international standards -- and their implications.)

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<sup>7</sup> William E. Nothdurft, Going Global, How Europe Helps Small Firms Export, The Brookings Institution, Washington, D.C., 1992

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- Nationalized enterprises, cartel-like organization, labor union participation, political and governmental influence, and difficulties in penetrating traditional networks of referrals and reciprocal trading patterns may in effect bar entry to American envirotech firms.
- Identifying and gaining access to key decision makers may often require social, commercial, political and personal contacts which new American entrants in foreign markets often lack.
- Financing is often impossible to obtain, while foreign competitors often have attractive (and often government sponsored) financing support. Further, learning how to effectively utilize the various trade financing mechanisms which are available from the Department of State, Commerce, USAID, EPA, Export-Import Bank, and others, is difficult and time-consuming.
- Putting together the full package of goods and services that potential customers need may require teaming up with other suppliers. U.S. firms with expertise in a particular area of environmental services will often need to provide complementary services (for instance, education and training, which could be provided in co-ordination with an academic or governmental training institute) in order to provide effective and useful programs in a foreign context. Moreover, U.S. firms will be in competition with business firms and governmental enterprises from other countries seeking to sell environmental goods and services abroad, sometimes in an integrated, well-funded, "team" approach.
- Access to foreign firms and governments is often best obtained through centralized "official" trade associations, particularly in Latin-American and Eastern European countries with a history of centrally organized states.
- In many cases bureaucrats will either have sole control or a veto over purchases of environmental goods and services. Thus, close personal contacts will often enhance success.

The envirotech industry needs a central voice to address these problems. Moreover, the Clinton-Gore Administration has indicated its interest in using environmental exports as one of

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the critical industries for economic growth and the generation of new jobs. However, if this interest is to bear fruit the private sector must organize itself so it can effectively shape government policies and programs.

We believe that a nationally-organized, highly mobilized U.S. envirotech industry can be very helpful in reaching the Clinton-Gore Administration's goals to expand the number of high-wage jobs in our economy and to promote better environmental management globally. By increasing the export of U.S. environmental technologies, products, and services, we can dramatically and quickly expand employment in the U.S. industry. Importantly, this growth would occur in areas of the nation (e.g., California and the Northeast) that have been hard hit during the recent recession and which will suffer through defense cutbacks. Our estimates, based on research provided by the Environmental Business Journal, is that by 1996 approximately 200,000 jobs will be created in the United States environmental industry serving the domestic market. We believe an aggressive government/industry program of export promotion of environmental goods and services including the activities we propose could create an additional 100,000 to 300,000 jobs.

## 2. Technological Competitiveness

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According to the World Resources Institute<sup>8</sup>, many industrial countries are now devoting larger amounts of R&D resources to the search for new environmental technologies, not only to solve environmental problems at home but also to strengthen the competitive position of their industries internationally. In the United States, however, where national security has dominated the technological agenda for half a century, public priorities have been slower to shift. Despite the U.S. head start in environmental protection and technology, Germany, Japan, and other Organization of Economic Cooperation and Development (OECD) countries have gained an edge in many environmental technologies - air pollution equipment, for example. In these countries, industry and government often cooperate in developing advanced technologies, including those with potentially critical environmental advantages.

Many in the envirotech industry believe that their technological progress is being impeded by a lack of direction in public policy. Many also believe that government regulatory policy often inhibits innovative solutions. We believe, however, that there are two additional factors which in fact inhibit the envirotech industry's ability to maintain and improve its competitive advantage.

First, the lack of a long-term technology development vision

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<sup>8</sup> George Heaton, Robert Repetto and Rodney Sobin, Backs to the Future: U.S. Government Policy Toward Environmentally Critical Technology", World Resources Institute, Washington, D.C., June, 1992.

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in U.S. environmental policy casts a fundamental uncertainty over investment strategy in U.S. industry and has erected barriers to environmental technology innovation. In this regard, we believe there are substantial opportunities for employing defense-related expertise and technology to provide both structural assistance to the nation's defense conversion program and to stimulate advances in environmental technology.

An extensive study published in 1991 by EPA's Technology Innovation and Economics Committee concluded that the barriers in state and federal environmental and compliance policies are slowing technology innovation for environmental purposes. The study, which involved public and private sector stake holders, recommends major areas for improvement and concludes that fundamental changes to the environmental regulatory system will also be needed to encourage technology innovation.<sup>9</sup>

But innovation alone is insufficient if the opportunities for commercialization and environmental protection in the domestic and international markets are to be realized. A second factor is involved. Technology must be diffused. This is accomplished by the spread and adaptation of a technical idea following early commercial use. This can be accomplished by such activities as technical assistance, publications, training, licensing policies and other technology transfer programs. A

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<sup>9</sup> Permitting and Compliance Policy: Barriers to U.S. Environmental Technology Innovation, Report and Recommendations of the Technology Innovation and Economics Committee. USEPA 101/N 91/001 January 1991.

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clear government policy must be adopted and implemented for improving technology diffusion. In a recent report, EPA's Technology Innovation and Economics Committee concluded that the environmental regulatory system could expand environmental progress and improve economic competitiveness if processes that diffuse environmentally beneficial technologies are used to effectively complement regulations. The report makes several important policy recommendations including, among others, making diffusion an EPA mission by building relationships with industry, supporting research, and expanding support for the international diffusion of environmental technologies to help meet U.S. environmental and competitiveness objectives.<sup>10</sup>

The EBC-US can play an effective role in encouraging and facilitating innovation and diffusion of environmental and energy technology. Fortunately, some American leaders in and out of government are beginning to address these technological and economic challenges. Moves are afoot in the U.S. Congress to create national initiatives to support environmental research and development and to stimulate technological advances. If properly designed and implemented, with strong input from a national industry association, such initiatives could give the U.S. envirotech industry a major economic boost.

### 3. Lack of Co-ordination Among Envirotech Clusters in the

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<sup>10</sup> Improving Technology Diffusion for Environmental Protection, Report and Recommendation of the Technology Innovation and Economics Committee. USEPA 130-R-92-001, October 1992.



## United States

The U.S. envirotech industry is not currently well-organized. Typically, existing U.S. environmental industry associations are either centered on sectors of the industry (e.g., Air and Waste Management Association, Hazardous Waste Action Coalition, Water and Wastewater Equipment Manufacturers Association), or are geographically localized (e.g., the Environmental Business Council, Inc. in New England., California Environmental Technology Partnership, Oregon Environmental Technology Association, Washington Environmental Industry Association and other organizations being formed in New Jersey and Maryland). This sectoral and geographical organization has hampered efforts to address technology development and to effectively shape government policy in order to increase the export of envirotech goods and services. Especially at the national level, a coherent and sophisticated single voice is needed to assist the U.S. envirotech industry to compete in the global marketplace.

Services represent a significant part of the envirotech industry and they also represent a large proportion of the potential global market. We believe there exists a strong relationship between the export of environmental services and the sale of environmental products. That connection may be illustrated by the sale of environmental engineering and consulting services abroad. This often leads to a service order specifying a U.S. environmental or other sector product for use

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in a proposed project or facility. Usually the service provider's staff is familiar with the product by reason of written or other reports or recommendations or by actual experiences with the equipment. Such service providers must, of course, recognize that when working for foreign governments or in other international situations performance specifications may be required. Nevertheless, whether specific product or performance specifications are used, successful international environmental service providers can "pull through" sales of environmental and other products from the U.S. companies. There are other service/product relationships which should be encouraged as well. These include the sale of environmental products which can lead to a demand for services. An example would be a post sale need for specialized environmental software for computers, or for insurance or trade financing.

Nowhere is there a national environmental trade association dedicated to promoting the interests of this burgeoning industry.<sup>11</sup> The creation of such an association would help represent the nearly two million Americans whose livelihoods depend on the envirotech industry and would help give voice to the "jobs" side of the "jobs and environment" equation.

It is the responsibility of government as a partner in this

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<sup>11</sup> The Environmental Technology Export Council (ETEC) an organization of some 40 businesses, national laboratories, and trade associations, was established in 1992 with the goal of enhancing export opportunities for U.S. industry. EBC-US is working closely with ETEC to assure that the envirotech industry has a single voice.

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envirotech venture to organize the various departments and agencies of the federal government to support environmental technology development, innovation diffusion, and the export of environmental goods and services. It is, however, the responsibility of business to create, organize, fund and manage the national environmental industry trade association which is needed to achieve these goals. Both must cooperate to fund and conduct the necessary research about the industry, the global markets, and the other activities, including training and information transfer, needed to achieve these goals.

We believe that creation of a national association for the industry is essential if the industry is to meet these challenges and realize its potential. The EBC-US will work with its members to identify the necessary pools of skills, work force training programs, technology, and infrastructure required to enable its industries and firms to sustain long-term global competitiveness. It will interact with other related and supporting industries and associations. It will encourage environmental regulation which pressures firms to innovate and will encourage company formation to provide the products and services necessary to help industry meet domestic and international environmental standards. It will work with its membership to encourage innovation, sustained investment, and vigorous competition among local rivals. In so doing, with both government and the private sector, the EBC-US will work to form and further develop nationally and internationally competitive clusters of envirotech industries across the United States.

## V. LOCAL AND REGIONAL ENVIROTECH ASSOCIATIONS AS MODELS

### 1. The New England EBC

The New England EBC, like the other local envirotech industry associations whose members are sponsoring this initiative, is an association of environmental and energy firms organized to foster the development of an effective and competitive envirotech industry and to enhance and maintain a clean and productive environment. The New England EBC is one useful model for demonstrating the structure, goals, and benefits of a national envirotech association.

The New England EBC provides active membership programs, including networking, domestic business development initiatives, international trade opportunities, and education and technology

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transfer. It is also engaged in research about the regional envirotech industry.

The Board of Directors includes principals and senior executives of companies from various industry sectors, as well as representatives of educational institutions and law, accounting, venture capital, and financial service firms. There are close to 200 member organizations representing all sectors of this diverse industry. Although most firms are from Massachusetts, the New England EBC has attracted members from other New England states and from Eastern Canada.

New England EBC's mission is to bring member organizations together with public and private sector organizations throughout the world, in order to promote business development and resource protection and modern environmental management for industry and government. To carry out its mission, New England EBC conducts member activities and has organized committees which offer programs ranging from seminars on human resource issues to international business development. In addition to monthly member meetings featuring important speakers, committee meetings, seminars and workshops are conducted regularly. Committees include: business development, communications, education/technology transfer, energy, human resources,

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international trade, marine science and technology, membership, and public affairs.

New England EBC has developed close working relationships with officials in both state and federal government, as well as leading organizations in the public and private sectors. It has achieved a reputation as a highly credible trade association.

The Agreement of Cooperation which the New England EBC recently entered into with Mexico's industrial trade association, CONCAMIN, illustrates how an organized U.S. envirotech industry can collaborate with industry in other nations in developing new market opportunities within the context of the international movement toward sustainable development. Under this agreement (which New England EBC entered at the invitation of CONCAMIN) the New England EBC assists CONCAMIN and its member companies to implement modern environmental management through information transfer, educational programs, training, and technology cooperation between New England EBC and CONCAMIN member companies. By the end of 1992, nearly \$100 million in contracts for new business had been committed or was under proposal. New England EBC is currently working to replicate this Mexican initiative in Canada, Latin America, Poland, and Eastern Europe.

## 2. Oregon Environmental Technology Association

The Oregon Environmental Technology Association (OETA) was founded in 1991 to more effectively address the unique

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opportunities and challenges facing the environmental industry. OETA is committed to providing effective and responsible environmental management, products and services that enhance economic and business objectives. OETA is committed to working with other organizations in establishing the Northwest and the United States as the world's primary supplier of environmental goods and services.

OETA has worked actively with the Pacific Northwest Economic Region (PNWER, an organization of five Northwest states and two Canadian provinces founded in 1989) which has recognized that the region, like New England, California, and other geographic clusters, has the critical mass of envirotech companies, academic and research institutions, and the existence of state and regional regulations and policies that support an active and effective environmental industry sector. PNWER has been pursuing a well-articulated goal to establish the region as a primary supplier of environmental expertise, goods and services. Situated on the Pacific Rim, the region is well positioned to serve the increased demand for environmental infrastructure, services and technology in some of the world's most rapidly industrializing economies of the world (Asia, Mexico, and Latin America). OETA, PNWER, and other environmental and trade organizations in the Western U.S. are actively pursuing collaborative efforts to increase the international competitiveness of the region's envirotech industry.

### 3. California Environmental Technology Partnership

The California Environmental Technology Partnership (CETP), created in 1992 by California Governor Pete Wilson, is a cooperative effort organized by the California Environmental Protection Agency (Cal/EPA) and the California Trade and Commerce Agency (formerly the Department of Commerce). CETP is a cooperative effort involving state government, industry, academia, financial institutions, and public interest groups to support the California envirotech industry and to maintain and expand its strong position in the national and global envirotech market.

One of CETP'S early goals is to develop, with the assistance of an advisory council of high level leaders from both government and the private sector, a "white paper" long-term strategic plan for California's environmental industry. CETP will also create technical working groups to develop solutions to specific technological or market development problems. Other projects slated for action in 1993 include, reform of the environmental permit system so that new technologies can be developed and implemented effectively, defense conversion initiatives designed to take advantage of the pools of scientific and engineering talent and know-how that exist within California's defense industry, a base closure program which seeks to maximize the opportunity for using closing military bases as "testing grounds" for innovative environmental remediation technologies, creation of an information clearing house on California envirotech goods



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and services, creating a California envirotech export marketing plan, and organizing a California envirotech industry conference.

#### 4. Other Regional Associations

A number of other state and regional associations have been established in the past few years or are currently being organized. We plan to work co-operatively with local organization, many of which would eventually become local chapters of the EBC-US.

#### VI. GOVERNMENTAL PROGRAMS AND INITIATIVES: THE NEED FOR STRONG INDUSTRY LEADERSHIP

Government policies and programs on a number of fronts are vital to the continued vitality and growth of the U.S. envirotech industry. The industry's current strong position is due, in significant part, to the advanced state of federal and state environmental regulatory requirements. This, as Dr. Michael Porter has pointed out, has been a key ingredient in creating the competitiveness of the American envirotech industry. As Dr. Porter also points out, formal government programs on other levels, including export assistance and financing, are critical to enabling this key cluster to maintain its competitiveness advantage. ,

At the federal level, there are a number of existing programs and initiatives to support the growth of the U.S.

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envirotech industry and the export of U.S. environmental goods and services. Similarly, there are comparable programs on the state level in many states, such as California and Massachusetts. We believe that such government support is essential. We also believe that to be truly effective it needs to be shaped and directed in a partnership with the private sector. A single national voice speaking for the envirotech industry is the necessary partner to government if we are to realize the potential of the U.S. envirotech industry over the next two decades.

Current federal programs and initiatives supporting the envirotech industry currently suffer from diffuseness and lack of coordination. Some of these programs are the following:<sup>12</sup>

- The Agency for International Development (AID). About 9% of total funding (or approximately \$600 million) has been spent for energy and environmental projects. Many observers feel that energy and environmental projects have been a low priority for AID.
- The Department of Energy (DOE). Doe undertakes or coordinates several export programs for energy technologies provides technical assistance in several countries, including Mexico, Thailand, Egypt, India, and

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<sup>12</sup> This list of programs is drawn from Developing a U.S. Strategy for Environmental and Energy Technology Cooperation and Trade, Center for Strategic and International Studies, Draft Round Table Report, February, 1993.

China.

- The Environmental Protection Agency (EPA) has several technology cooperation activities, including an international clearinghouse for environmental technologies, as well as training activities. The EPA is also currently developing new export initiatives. These include the EPA U.S. TIES program (U.S. Technology for International Environmental Solutions) involving information, testing, demonstration projects, and research and development in environmental technology.<sup>13</sup> U.S. TIES is currently designated for substantial funding (\$39 million) in the Administration's economic stimulus package.
- The Trade and Development Agency (TDA) funds feasibility studies for energy and environmental infrastructure projects and undertakes other market development activities.
- The Export-Import Bank (Eximbank) provides loans, guarantees and insurance to finance U.S. exports. Eximbank has funded a number of energy-related loans.
- The Overseas Private Investment Corporation (OPIC)

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<sup>13</sup> See Global Markets for Environmental Technologies, U.S. EPA, Task Force on Technology Cooperation and Export Assistance, December, 1992.

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provides political risk insurance and loan and other guarantees to U.S. companies investing in developing countries. OPIC is currently seeking to capitalize on environmental investment fund, authorized at \$100 million.

- The U.S.-Asia Environmental Partnership (US-AEP). This is an inter-agency initiative seeking to facilitate private sector entry into the Asian environmental and energy markets.
- The Department of Commerce has a number of programs that promote exports of energy environmental goods and services.

As this list demonstrates, there are a number of federal programs, however, they are not effectively coordinated. The need to coordinate such programs is one of four key strategy recommendations of a recent Round-Table Report of the Center for Strategic and International Studies (CSIS), a Washington, DC, independent public policy research institution. The four key elements of the strategy described in the CSIS report are "(1) improved coherence and accountability of U.S. government technology cooperation and trade support programs underpinned by (2) a mutually responsive business-government partnership; with a key focus on (3) market development and capacity building, and (4) increasing access to official bilateral and multilateral financing."

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We believe that a national envirotech association will be in a unique position to work with the Clinton-Gore Administration, and in particular to build on President Clinton's Technology Program, to reshape and refashion these government programs into an effective, pro-active government-business partnership that will allow U.S. envirotech industries to compete with industry competitors in Japan, Germany, and other countries where effective government support is a way of life. The CSIS Round-Table Report identifies building business-government cooperation as one of the key strategies for developing envirotech trade, and points out that in order to do this "business must organize itself to communicate its internal competitive priorities to the government."

Sponsors of this proposal have already been working with the Clinton Administration and with Congress on a number of important policy and legislative issues.

#### **1. Clinton Administration's Strategic Plan for Environmental Technology**

In his Earth Day Address on April 21, 1993, President Clinton directed the Department of Commerce to develop an interagency strategic plan for the export of U.S. environmental technology and to improve the competitiveness of these technologies. The Secretary of Commerce will work cooperatively on developing this plan with the Department of Energy and the EPA.

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The initial goals of the Administration's environmental technology initiative are to insure that technology research dollars are used to develop competitive environmental products and to expand markets for U.S. environmental products. This includes developing partnerships with key industries and government laboratories to assess the environmental impacts of proposed new technologies and to market environmental technologies to other nations. The Administration's initiative recognizes that the United States is a leading innovator in developing environmental technologies, and its goal is to help insure that U.S. manufacturers are at the forefront in selling environmental technologies in the global marketplace. The first meeting of this interagency taskforce was held on April 26. The sponsors of EBC-US are working closely with Administration officials charged with implementing this strategic plan and believe that the initiative presents a unique opportunity for the envirotech industry to work effectively with government to develop significant export markets.

## **2. The National Environmental Trade Development Act of 1993**

Sponsors of this proposal have worked closely with Congressman Gerry Studds in sponsoring important new legislation supporting the envirotech industry. This legislation (H.R. 2112), was introduced in the House of Representatives in May. Donald Connors testified before the House Sub-Committee on Environment and Natural Resources in support of this legislation on February 25, 1993. The National Environmental Trade

Development Act has the following key elements:

- \* Sets out a comprehensive statement of federal policy to develop and support the export of U.S. environmental products and services based upon the active participation by the private envirotech industry, together with federal and state agencies, institutions of higher education, and the public. The legislation recognizes that unless the private sector is brought into the process in a meaningful way, such an export promotion plan cannot succeed.

- \* Establishes a joint public-private Environmental Trade Promotion Council, appointed by the President and chaired by the Secretary of Commerce, with members from government, environmental businesses, labor, consumer, and conservation groups;

- \* Sets an April 30, 1994 deadline for the Council to develop a national strategy for increasing environmental exports;

- \* Authorizes a five-year program of matching funds for up to six Regional Environmental Business and Technology Cooperation Centers to assess foreign countries' needs and provide hands-on export assistance to small and medium-sized U.S. environmental companies;

- \* Establishes a new senior-level Environmental Service Corps within the Peace Corps to provide technical advice and assistance on environmental problems to developing nations; and

- \* Authorizes the Secretary of Commerce to establish American Business Centers and Environmental Business Centers in foreign nations to help U.S. firms, trade associations, and state

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economic development offices on a user-fee basis.

We believe that this legislation is critically important because it creates a process by which the envirotech industry, federal and state agencies, and institutions of higher education and the public may cooperatively devise an appropriate national strategy to promote the export of environmental products and services addressing all environmental sectors. This strategy could initially seek to maximize the opportunities for export development in target countries such as Mexico, Brazil, Turkey and Taiwan which are able to commit substantial resources to develop national programs of environmental management in the next decade. Next, and building upon the provisions of the Freedom Support Act, this strategy could include a plan to cooperate with the countries of the former Soviet Union and Eastern Europe in meeting their needs for new environmental technologies and management expertise through a variety of techniques (loans, joint ventures, etc.). Third, the strategy may link NAFTA-implementation legislation to specific actions by Mexico and the U.S. to secure substantial improvements in environmental management programs. For example, such legislation might require and support active, cooperative actions by national trade organizations such as the EBC-US and the Mexican Chamber of Industrial Organizations (CONCAMIN) to adopt new environmental technologies and management strategies to ensure compliance with Mexico's environmental laws. Fourth, this strategy could seek in appropriate ways to use both U.S. and international aid programs to developing countries to provide U.S. environmental products and services. Fifth, the strategy could seek authority for the



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Export-Import Bank to make low interest loans to assist the U.S. envirotech industry abroad in both developing and developed countries in carrying out joint enviro-business ventures. Finally, the strategy could include additional export enhancement measures (direct grants, subsidies, low-interest loans, loan guarantees, tax incentives, etc.) to support the export of U.S. envirotech products and services.

### 3. Green Technology Legislation

EBC-US sponsors are also working with the House Science, Space and Technology Committee on proposed "Green Technology" legislation. The concepts behind Green Technology include using technology to clean up pollution, designing products that are less polluting over their useful lives, including their eventual disposal, and changing the way products are designed and manufactured so that their manufacture is less polluting. The Clinton Administration is interested in this area, and Congressional sources believe that a Green Technology initiative can be expected in the near future. A Committee staff group has been working on proposed legislation for the current Congress. Such legislation would likely include a number of elements supportive of the envirotech industry, including:

- Review and coordination of existing federal programs and activities including a clearing house function to disseminate information about successful programs.
- Inclusion of environmental standards in current technology development programs at the Departments of

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Commerce, Energy, Defense and Agriculture, the National Science Foundation, and in other federal programs.

- A focused joint industry-government effort to develop technologies needed to meet regulatory and environmental challenges.
- A focused effort to develop remediation, cleanup, and pollution-control technologies.
- Create incentives to speed the implementation and adoption of Green Technologies, including tax credits and/or accelerated depreciation, government-industry joint venture funding, use of federal agency purchases as a first market for new products, direct government subsidies, and non-monetary subsidies such as regulatory relief.
- Establish educational outreach efforts.
- Incorporation of a program of standard setting and technology evaluation for Green Technology.
- Needs assessments of potential international markets for Green Technologies, and export assistance, including financial assistance.

#### 4. Existing Federal Legislation and Programs

Sponsors of this proposal have also worked for full implementation of several existing federal programs as follows:

- EXPORT ENHANCEMENT ACT -- This recently enacted legislation includes environmental trade promotion provisions (Title II) and other provisions supporting export of envirotech goods and services. We believe it should be quickly implemented. In particular, the "Environmental Trade Promotion Working Group" created by this legislation should be established among the

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designated federal officials and charged by the President through an executive order to prepare its recommendations to enable federal agencies to promote the export of environmental technologies, goods, and services. These recommendations may include regulatory changes, legislative proposals and other federal agency actions to help get existing technology to the right place at the right time.

A fundamental problem in the Export Enhancement Act, however, is its reliance solely upon federal officials for developing and implementing the recommendations to promote the export of environmental products and services. Industry participation is neglected. This problem can be remedied by the creation of a new national strategy, including new legislation, as described above. The provisions of the Export Enhancement Act should be acted on as soon as possible, but in anticipation of the new legislation described here. Further, federal agencies implementing the Act must recognize that the export of environmental services is fully as important as the export of environmental products, and that the two categories are closely related. Unfortunately, this linkage has been ignored and the export of services has not been sufficiently supported. We believe, and EBC-US will continue to advocate strongly, that our national trade policy should promote the export of environmental services on a par with environmental products, recognizing that the former often leads to the latter.

- FREEDOM SUPPORT ACT -- The Freedom Support Act of 1992

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(Pub. L. 102-511) provides substantial opportunities for the envirotech industry to participate in any program of economic assistance to the republics of the former Soviet Union that may be approved by the new Administration. Under this Act, environmental technologies, training, and education may be provided by U.S. business, non-profit organizations, and universities to these emerging democracies. \$417 million has been appropriated to carry out the Act. A reasonable portion of these funds should be allocated to support providing U.S. environmental technologies and business and management experience to these countries. The Departments of State and Commerce should be required to implement these provisions of the Freedom Support Act as soon as possible.

- MARKET-BASED INCENTIVES -- To promote continuing development of domestic environmental management programs, we endorse the adoption of market-based incentives to achieve environmental objectives. In addition, and in light of the fact that more than 30% of the U.S. envirotech industry manufactures environmental products, we have urged the new Administration to support investment tax credits for envirotech industry investing in new facilities and equipment.

- CLEAN FUELS POLICIES -- With regard to national energy policy generally, we support proposals that would increase energy conservation and efficiency and provide for demand-side management. Specifically, to support the development of new and cleaner energy sources and to reduce environmental pollution and

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to create jobs, we recommend policies and incentives to encourage the use of sustainable development fuels over the next decade: solar, wind, and geothermal.

VII. THE ENVIRONMENTAL BUSINESS COUNCIL OF THE UNITED STATES,  
INC.

We believe that a national envirotech industry association will provide the necessary central voice for the industry in forging a partnership with government and will materially enhance the effectiveness of these emerging regional associations and others that are now in the early stages of formation.

1. Mission

We have established the Environmental Business Council of the United States, Inc. (EBC-US). The goal of the EBC-US is to provide leadership in fostering the development of an effective and internationally competitive envirotech industry, for the purpose of helping to protect the environment through environmentally sustainable economic development. It will support the U.S. envirotech industry in several ways:

- Increase access to international markets and to buyers of envirotech goods and services, both in the U.S. and abroad. EBC-US members need help in overcoming the expensive and time consuming obstacles to doing business in the international environmental marketplace. In many countries, personal

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relationships, comprehensive solutions, and contacts through an official trade association are required. Through EBC-US research, information, contacts, and trade missions, members will have access to the critical purchasers of envirotech goods and services. Members will also be able to compete on a level playing field with Western European and other competitors as part of a commercial, governmental, and academic team. Through EBC trade conferences, shows and expositions, and cooperative public/private export development programs, members will have access to key environmental managers, public and private. This access to potential customers will assist in understanding the market for envirotech goods and services and what improvements and changes customers would like to see. EBC-US will help envirotech firms maximize their business development expenditures in the domestic and international market place.

- Promote U.S. national and state policy favorable to the development of the envirotech industry. The EBC-US would provide a currently non-existent central voice to help its members work with federal policy-makers to achieve a coherent and useful set of national policies, institutions and programs supporting the U.S. envirotech industry. Tax policies, market-based environmental controls, export financing, official development assistance for environmentally critical technologies, and other government programs all need to be made more useful. The EBC-US would be a strong voice in Washington and the state capitals in legislation, policy development, and program implementation. It will also organize meetings involving its members and key

government decision-makers for this purpose.

◦ Spur networking of companies to support joint business development. EBC-US will create an opportunity for active personal networking of envirotech firms which would more efficiently support the organization of joint ventures where cooperation is the best strategy for gaining business. It would also facilitate collaborative efforts towards providing a full range of environmental goods and services, training, education and information to public and private environmental managers, the buyers in the domestic and global markets. The EBC-US will also help members understand what the competition is doing. The EBC-US membership directory, newsletter and trade magazine will be valuable resources for these purposes.

## 2. The National Envirotech Conference

We propose to launch the EBC-US at a National Conference to be held in Washington, DC on June 8-9, 1993. The National Conference, which will be an annual event, will bring together industry and other leaders from the public and private sector nationally, including key federal administration officials, legislators from the U.S. Senate and House of Representatives, state government officials, UN officials engaged in global oversight of the implementation of Agenda 21, members of the Commission on Sustainable Development, and other national and international organizations engaged in working through the implications of sustainable development. We propose a highly

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visible conference to be attended by invited representatives from envirotech organizations, private sector leaders, academic and research institutions, environmental regulators, and financing organizations. We believe that in succeeding years the National Envirotech Conference will become a critical forum for the industry, for environmental managers, and other public and private interests seeking information about environmental goods and services, education, training and information.

### 3. The International Environmental Business and Technology Institute

A genuine working compact between government and industry in this area requires the establishment of a "switching gear" entity to bring the two together. Such an entity, the International Environmental Business and Technology Institute, Inc. (the "Institute") has been established as a not-for-profit organization and will work with EBC-US in various areas where government and the private sector must coordinate efforts.

Fundamental to the Institute's mission is the recognition that the private sector -- the U.S. environmental industry -- is a critical engine for introducing and maintaining increasingly higher environmental standards and achieving the goal of sustainable development throughout the world. This vital role of business-based technology cooperation was acknowledged in Agenda 21 adopted by the conferees at the Rio Conference in June, 1992, which recognizes that technology cooperation between developed



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and developing countries "involves joint efforts by enterprises and governments, both suppliers of technology and recipients."

The mission of the Institute is twofold: First, to foster the use of appropriate environmental management technologies and strategies globally, and, second, to implement these goals primarily through private sector, business-to-business, initiatives and economic incentives. The Institute would also work closely with government entities, public organizations, and institutions of higher education to carry out its mission.

The Institute will have a national board of directors, drawn from industry, government, academia and public organizations. The University of Massachusetts has indicated its willingness to provide suitable permanent facilities for the Institute. Funding for the Institute's programs is being sought from industry, state and federal agencies, institutions of a higher education and foundations. A number of private and government sources have already expressed interest in providing some financial support for the Institute. In addition, EPA has committed to providing \$150,000 in funding for the first project described below, which is budgeted at \$157,500.

The Institute's functions will include the following:

- \* identification of specific country and area needs for appropriate environmental technologies, products, and services.

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- \* providing advice and assistance to foreign governments on appropriate environmental policies.
- \* conducting training and education programs for foreign nationals in the U.S. and abroad in U.S. environmental technologies and management strategies.
- \* providing advice and assistance to federal and state agencies on appropriate policies to promote the export of U.S. environmental products and services.
- \* conducting meetings, conferences, and exchanges to promote the exchange and transfer/diffusion of appropriate environmental technologies and management strategies to support the sustainable use of global resources.

#### Initial Projects:

The Institute currently plans to conduct three critical projects in its first two years.

- o The first project would focus on the emerging global environmental management system which is rapidly taking shape. Although the Rio Conference and the comprehensive environmental document "Agenda 21" have drawn attention to the international dimensions of environmental management for sustainable development, the driving forces of the emerging system originate in the environmental management practice of many nations and in a series of international efforts to address air and water pollution, handling and transport of hazardous materials, and protection of endangered species and critical habitats. Additionally, international donor/lender organizations such as the World Bank and domestic agencies such as U.S. AID have begun to

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restructure development projects to respond to environmental imperatives. This study would critically analyze the components of the new international system in an effort to support business to business contacts in order to maximize the transfer of environmentally-sound technologies.

The first project would also include, as a distinct component, an analysis of the near-term structure of the international environmental management system. Recognizing that the major realignments of the international sustainable development movement are most likely to occur after the year 2000, this study will also analyze the strategies by which the U.S. envirotech industry and government agencies may help shape the evolution of the new international system during this near-term period.

- The second project is a national review and analysis of the U.S. environmental industry. Although such information and data exists in various formats, a comprehensive study identifying the industry's strengths and weaknesses and its prospects for growth in the domestic and global markets will be of great value to promoting the goals of the Institute and will enable governments, non-governmental agencies, and others to understand the resources of the industry.

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- The third project involves a study, carried out by the Institute jointly with one or more environmental organizations, of the intersections between international trade and U.S. environmental programs and standards in such multilateral fora as the GATT and NAFTA negotiations. We believe that the Institute's goals are similar to the goals of many environmental organizations and that the environmental industry and the environmental community should cooperate to preserve U.S. environmental standards through appropriate international trade policies and agreements. In fact, the EBC-U.S. and the Defenders of Wildlife have already submitted to the U.S. Trade Representative a specific proposal to involve the environmental business community in Canada, Mexico, and the U.S. in the resolution of trade disputes arising out of complaints of non-compliance with domestic environmental laws.

Finally, in order to demonstrate the effectiveness of the Institute's approach, the Institute also proposes to select a target country or area (e.g., Mexico or several Eastern European countries) as a demonstration area and carry out the functions identified above.

#### VIII. Organization of EBC-US

The EBC-US will be a national association with offices in Washington, DC. It will charter existing environmental industry

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associations or new local or regional chapters organized in regions of the country having clusters of envirotech organizations. EBC-US will be governed by a Board of Directors of appropriate size, including representatives of relevant areas of the U.S., envirotech industry segments, and chapters. Committees and panels of advisors will be established. Major conferences, trade shows or annual events would supplement the regular activities of the EBC-US.

The EBC-US will be future, nationally and internationally oriented, steering clear of matters of regional or local significance best left to its chapters, individual companies or other trade associations. It will work to be recognized -- at both the U.S. and the international levels -- as a voice for the common good and to shape the coordination of economic development and environmental protection in the United States and globally.

To give a picture of the potential size and configuration of the EBC-US, there are some 60,000 envirotech firms nationwide which tend to be clustered in some 15 areas around the country. Additionally, there are many thousands of other organizations, including business purchasers of envirotech services, government agencies, academic institutions, and research and development consortiums that would also seek to be active members because they are involved in one way or another with the envirotech industry.

In order to facilitate the launch of this national

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envirotech association, a charter, by-laws, and articles of organization for the EBC-US have been filed. This proposal represents our best thinking on the structure, function, and goals of such an organization. It is, of course, a discussion document and we actively seek the comments of envirotech leaders who are sponsoring the EBC-US. After the June 1993 Conference we would anticipate that several individual chapters would be chartered and a meeting of the EBC-US board would be held. Over a three year period, we expect up to 6 chapters to be chartered.

## IX. CONCLUSION

Establishing and operating such an organization will require substantial financial support. If we can raise these funds and do the things outlined in this document, we will have begun implementation of a comprehensive global strategy to develop the U.S. envirotech industry and assist the world in achieving environmental protection and sustainable development. A partnership between the EBC-US and its chapters and the federal and state government will be forged to assist the envirotech industry to identify and develop business opportunities across national borders.

\* \* \*

## ACKNOWLEDGMENTS

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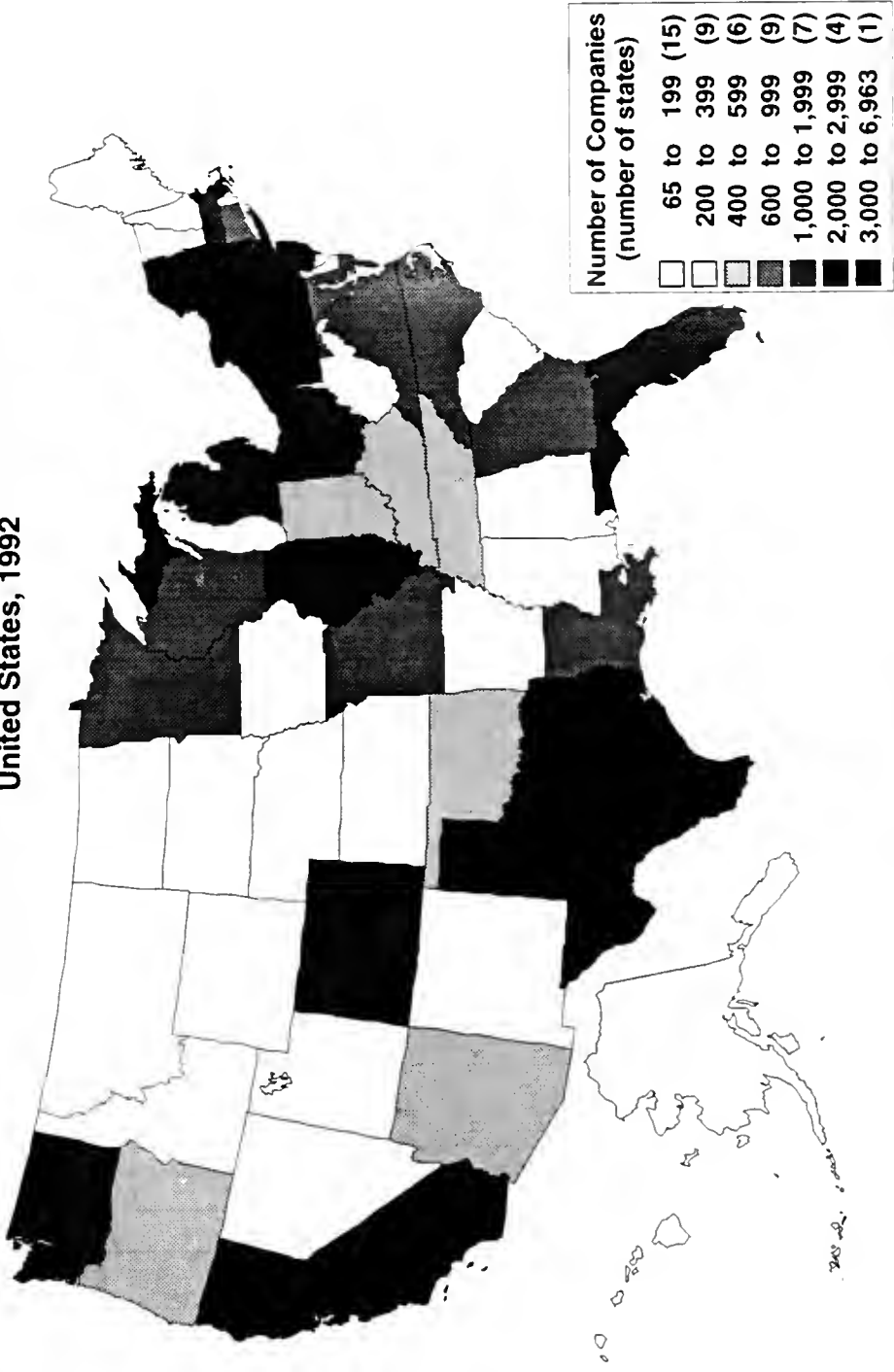
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Martin Cohn (617) 890-4242

Environmental Business Council of the United States, Inc.  
Boston, Massachusetts

**Distribution of Environmental Companies in the  
United States, 1992**

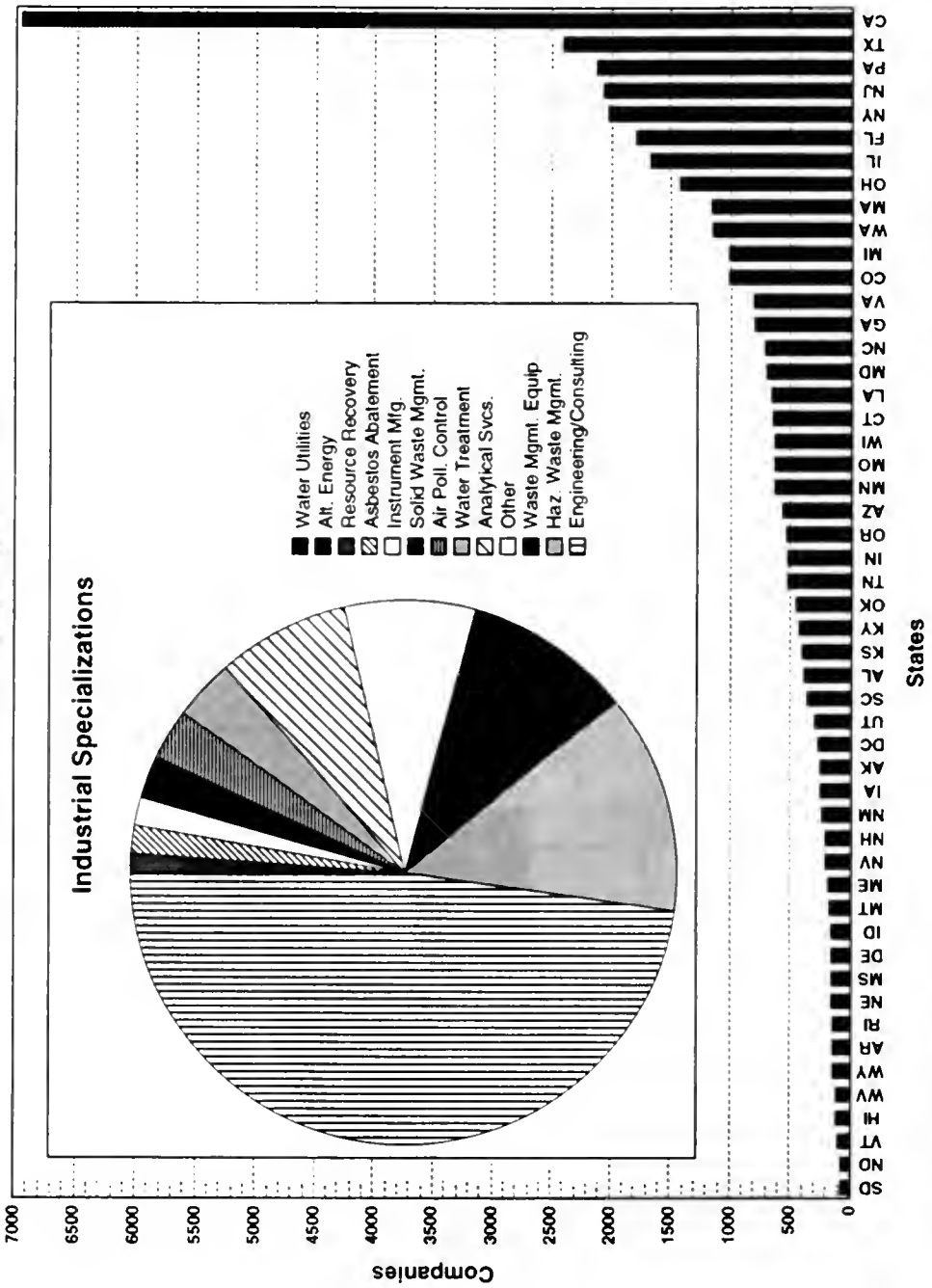


Source: Environmental Business Journal Map prepared by HDM: Harvard Design & Mapping Co., Inc.



Number of Environmental Companies per State, 1992

Environmental Business Council of the United States, Inc.  
Boston, Massachusetts





THE PROMISE OF ENVIRONMENTAL EXPORTS:  
AN EXAMINATION OF HR 2112

TESTIMONY OF WILLIAM J. SNAPE, III  
ASSOCIATE COUNSEL, DEFENDERS OF WILDLIFE

BEFORE THE HOUSE MERCHANT MARINE AND FISHERIES COMMITTEE  
SUBCOMMITTEE ON NATURAL RESOURCES AND THE ENVIRONMENT  
MAY 25, 1993

Mr. Chairman, my name is William Snape, Associate Counsel for Defenders of Wildlife (Defenders). Defenders is a non-profit advocacy group that concentrates its efforts upon combatting species extinction and the overall loss of biological diversity. I am pleased to offer my thoughts and overall support for the National Environmental Trade Development Act of 1993 (HR 2112) on behalf of Defenders and our 80,000 members. I also request that this testimony and its appendices be printed in their entirety for the record.

### Introduction:

Defenders involvement in issues relating to international trade largely parallels the growth of the now adolescent "trade and the environment" discipline. At first, Defenders focused primarily on trade in wildlife and wildlife parts under CITES, work which continues to this day. Since the infamous tuna/dolphin GATT panel decision of August 1991, Defenders has begun extensive examination of global multilateral trade agreements like GATT, and regional pacts such as NAFTA, so that trade liberalization for goods and services does not occur unsustainably and so that the agreements themselves do not challenge legitimate environmental and conservation standards as illegal trade barriers. Just recently, largely from our efforts in helping shape the NAFTA environmental supplement called for by President Clinton, Defenders has worked on advancing the positive environmental aspects of international trade. Through all these efforts, Defenders has realized the permanent link between trade policy and sustainable growth. HR 2112 represents an important cog in this policy wheel.

My testimony today will focus on two main topics:

- a) HR 2112's relationship to international trade agreements like NAFTA and GATT, as well as the OECD; and
- b) arguments in favor of including the Department of the Interior, the U.S. Trade Representative's Office, and the Department of Treasury in the Environmental Trade Promotion Council established by HR 2112. Such inclusion is consistent with Defenders' vision of the ideal trade/environment interagency process.

In order for the U.S. to develop a coherent policy on trade and the environment, all affected governmental agencies and the public must be given the opportunity to assess the legal substance of trade agreements, as well as participate in promoting American environmental export capabilities. In fact, perhaps the most appealing aspect of HR 2112 is the openness it commands in developing environmental export policy. Defenders hopes that

equally democratic means are utilized by the Clinton Administration in developing its trade agenda. So far, signs are promising, but the Administration does not yet have its trade/environment team fully in place. The interagency U.S. report to the OECD Ministers, for instance, continues to duck crucial questions. One cannot overemphasize the danger of creating any trading structure that is not accountable to interested citizens.

#### Exports under NAFTA and GATT:

As President Clinton has stated, "Our exports are especially important to us. As bad as the recent recession was, it would have gone on for twice as long had it not been for what we were able to sell to other nations ... our policies must protect our environment, promote economic growth, and provide millions of new high-skill, high-wage jobs." So long as a broad range of U.S. sectors, small and large, participate in export growth, most analysts agree that increased exports will almost certainly lead to increased jobs.

Because Mexico's present average tariff for all goods and services is 10%, as compared to the U.S.'s 4%, NAFTA tariff reduction and elimination schedules over the next 10-15 years promises increased U.S. access to many Mexican markets, including environmental technologies. The U.S. and Canada have already begun a reduction of tariffs as a result of the 1989 Canada-U.S. Free Trade Agreement (CUSFTA). Similarly, most representatives of the business community are calling for a swift completion of the Uruguay Round of the GATT so that U.S. exporters can enjoy the open access to global markets that most of our competitors now enjoy in the U.S. market. Amid fears of a growing U.S. trade deficit, the present \$4 billion trade surplus in the environmental technical sector offers tangible proof of this sector's enormous export potential. In addition, many environmental exports are service based -- another growing U.S. export sector.

Yet while Defenders supports the notion of free trade, countries must ensure adequate infrastructure plans and resources for the increased air, water, and land traffic spawned by agreements like NAFTA and GATT. As just one example, we strongly believe that any federal agency action, including the negotiation of trade agreements, that may affect the human environment or any threatened or endangered species, should be reviewed as provided for by NEPA and the ESA. 42 U.S.C. Sections 4331 et seq.; 16 U.S.C. Sections 1531 et seq. In addition, international trade agreements should not threaten legitimate environmental and conservation standards for the sake of "free trade."

### Environmental Exports and NAFTA Enforcement:

Because it appears almost certain that the environmental supplement to NAFTA will include a mechanism to compel enforcement of parties' environmental laws, such a mechanism should explicitly include formal technical and cooperative consultations. Very often, the underlying cause for noncompliance with environmental standards, particularly in Mexico and other less developed countries, is technological incapacity or management deficiency. U.S. enviro-technology businesses, which already possess a wide array of impressive technical goods and services, could and should be the beneficiaries of Mexico's technical needs. In this way, both the environment and U.S. jobs win.

On April 8 of this year, Defenders and the Environmental Business Council submitted a proposal to Trade Representative Mickey Kantor, in this testimony's appendix, to make technical environmental assistance a formal part of the NAFTA enforcement regime. Since at least the U.S. enforcement proposal is now established, the technological assistance aspect of the proposed U.S. regime needs to be revised.

First, however, a brief description of the U.S. enforcement proposal, as verbally described by officials at USTR to representatives of the environmental community on March 18, is necessary. I should note that Defenders saw the written U.S. proposal only after it was leaked by trade journal late last week. A letter from Defenders in response to the U.S. proposal is included in the appendix. Essentially, a four part enforcement scheme has been established:

1. Any affected individual or group, as well as the Public Advisory Committee to the North American Commission on the Environment (NACE) or a NAFTA party itself, can petition the Secretariat of the NACE to investigate an allegation of lax or non-enforcement of environmental standards by any of the NAFTA parties. The Secretariat can also initiate an investigation of an enforcement problem(s) on its own, though the NACE Council (i.e. environmental ministers) can reject all investigation requests by the Secretariat by unanimous consent.

2. If, after investigation, the Secretariat or a NAFTA party finds a "persistent and unjustifiable pattern of nonenforcement," it may convene a special meeting of the NACE Council, which can attempt to facilitate consultation among the interested parties to resolve the dispute. The NACE Council can unanimously reject Secretariat reports on lax enforcement;

3. If after thirty days consultation is unsuccessful, the enforcement issue can be sent to the a special arbitral panel under NACE, provided at least two of the three NAFTA countries approve;

4. If the arbitral panel concludes that the lax enforcement allegations constitute a "persistent and unjustifiable pattern," a complaining country can impose trade sanctions under its own laws, provided the NACE Council does not unanimously veto the panel's decision within thirty days.

Technological assistance and management cooperation are not a formal part of the consultation process as developed by the Administration's present NACE enforcement proposal. Given Canada's apparent dislike of trade sanctions for environmental violations, as well as Mexico's financial interest in avoiding such sanctions, Defenders believes that a more result oriented approach to enforcement problems is a potential negotiating solution. NACE technical consultation could also draw upon the preliminary efforts of the existing U.S.-Mexico Environmental Business Committee, established in 1991 under the auspices of the Joint Commission on Investment and Trade.

Establishment of an explicit technical cooperation mechanism in the NACE enforcement regime, backed up by the "stick" of sanctions if necessary, would help change the course of NAFTA enforcement from an adversarial process to a process that would include the private sector of each country in working to improve enforcement in a productive fashion. This approach would protect not only the competitiveness of U.S. businesses, who by and large already comply with the toughest standards in the world, but also the environmental condition of the continent.

#### A Revised Environmental Export Proposal for NAFTA/NACE:

Assuming the present U.S. proposal is adopted, Defenders suggests that, as mandatory part of consultation, the NACE select an industry-environmental task force with significant public and governmental participation to quickly (i.e. within 30 days) conduct a study to make two determinations: (1) whether or not the company or industry which is the subject of non-compliance possesses the technological capacity to comply with applicable environmental standards, and (2) whether or not the capacity to effectively implement environmental management is a factor to be addressed to secure compliance. The task force would conduct its study and make its final recommendations by majority vote.

A finding by the task force that technological and management capacity are obstacles to compliance would require the task force to also propose remedies to be applied within a set time frame to address these obstacles. The failure of the industry or country to adequately respond to the findings of the task force would trigger the authority of a NAFTA party or NACE Secretariat to bring the enforcement dispute before an arbitral panel, as provided by the Administration's present proposal.

HR 2112's Relationship to NACE Enforcement:

Because one of the main purposes of HR 2112 is encourage U.S. private sector exports of environmental technology and expertise, there is no question that the Environmental Trade Promotion Council, the regional cooperation centers, and the foreign American business centers in Canada and Mexico -- all proposed by HR 2112 -- should be integrally involved in the technical cooperation consultations of NACE.

The Environmental Trade Promotion Council, when developing and preparing action plans, could expressly consider opportunities for U.S. enviro-tech businesses under the NACE enforcement scheme. Given USTR's integral role in shaping trade policy and negotiating trade agreements, the Council should have an environmental representative from USTR's office at the table. The regional cooperation centers, when assisting U.S. foreign businesses, could expressly incorporate information generated by the NACE petition and report processes. Likewise, the foreign American business centers in Canada and Mexico could help flag export possibilities for U.S. businesses based upon compliance problems. In sum, the NACE enforcement regime to be created by the NAFTA environmental supplement can and should be directly tied to the environmental business opportunities that HR 2112 seeks to provide.

According to the Department of Commerce, Mexico is already the largest market for U.S. environmental technologies and services in Latin America. In 1992, the Mexican market for such technologies and services was over \$1 billion, with the U.S. accounting for roughly 1/3 of the import market. With NAFTA, this percentage should rise rapidly, though there exists competition from Japan, Germany, France, and Switzerland. Japan and Germany, for instance, actively promote public-private promotion of environmental exports and threaten U.S. competitiveness in this area. Because potential NAFTA parties like Brazil, Venezuela, Chile, Argentina, and Columbia represent significant environmental export markets for the U.S, the time is now for the U.S. to change its trading philosophy. HR 2112 could be the catalyst for such trade expansion.

HR 2112's Relationship to GATT:

Needless to say, the successful conclusion to the Uruguay Round and/or "Green" Round of GATT are far from certain. Nonetheless, the NAFTA supplemental process has revealed a growing consensus that the externalization of environmental costs creates unacceptable trade distortions and ecosystem damage. While the NACE enforcement scheme now under negotiation may not be totally appropriate in the GATT context, there will surely be efforts to encourage GATT signatories to adopt and enforce sustainable

environmental regimes. If such a scenario occurs, the Environmental Trade Promotion Council, the regional cooperation centers, and the foreign American business centers will each have vital roles in facilitating U.S. environmental technical expertise throughout the globe.

Fortunately, HR 2112's trade promotion goals do not violate GATT's prohibition against direct export subsidies because the assistance envisioned by the bill is aimed at marketing assistance, export research, and educational activities. A GATT signatory, however, could impose countervailing duties against a country which provides subsidies for installing pollution control technologies. Thus, if Mexico provided tax breaks to companies who install air pollution scrubbers, as a means of securing compliance under a NACE enforcement action, a non-NAFTA party to the GATT could theoretically impose countervailing duties upon Mexico. Although the negotiators in the Uruguay Round have actively considered allowing such environmental subsidies as a GATT exception, the proposal has been deleted, partially at the request of the Bush Administration. This environmental anomaly, among many others in the Uruguay Round, should be remedied by the Clinton GATT negotiators.

#### Conservation Concerns Under HR 2112:

The Department of the Interior already has a number of cooperative activities and projects with Mexico and Canada. While many of these activities are appropriately conducted on the government to government level, it seems to us that there are significant private sector opportunities, particularly in providing conservation and land use-related services in Mexico. For example, under the Endangered Species Act, landowners are allowed to carry out activities that may incidentally kill protected species if they create and implement a plan that conserves the habitat of the species. ESA, 16 U.S.C. Section 1539(a)(2).

Although the Mexican government is obviously not directly subject to this provision of U.S. law, the process of habitat conservation planning (HCP) has created a large body of technical knowledge that could be imparted to interested Mexican parties. Secretary Babbitt's California gnatcatcher agreement is the latest effort to balance economic growth and effective conservation in this fashion. Given that Mexico has signed the Biodiversity Convention, which requires each signatory to implement a national biodiversity conservation program, the American HCP experience could be valuable to the Mexican government and investors in Mexico. See, e.g. NAFTA Article 1114. There are many other lesser developed countries that could similarly benefit from American conservation services.

Therefore, we believe that the Department of the Interior



should be an agency on the Environmental Trade Promotion Council, and that conservation services (and technology) be an integral part of the regional cooperation centers and American foreign business centers. The FWS is already working with the U.S. embassy in Mexico to establish a technical attache in Mexico City.

U.S. Foreign Aid under HR 2112:

HR 2112 recognizes that foreign aid agencies like AID and the Export-Import Bank are vital slices of the environmental export pie. HR 2112 also proposes to establish an environmental service wing within the Peace Corps to promote global sustainable development -- a move we support.

HR 2112, however, neglects the Treasury Department, which possesses the authority to instruct the U.S. representative to the World Bank and other multilateral lending institutions how to cast the vote of the United States on certain lending projects. See Exec. Order 11,269, 31 Fed.Reg. 2813 (1966), reprinted in 1966 U.S. Code Cong. & Admin. News 4622; see also 22 U.S.C. Sections 286-286kk. The Treasury Department, of course, also formulates broad economic policy for the President. Given these roles of Treasury, we suggest that it also become a member of the Environmental Trade Promotion Council. Furthermore, in all instances of U.S. foreign aid where appropriate, U.S. agencies should promote foreign purchases of useful U.S. environmental technical goods and services to help foster sustainable development.

Conclusion:

Despite the existence of present laws that attempt to promote U.S. environmental exports, it is clear that more should be done. Just last month, on Earth Day, President Clinton formally asked the Secretary of Commerce "to develop an inter-agency strategic plan to increase exports of U.S.-made environmental technologies and to improve the competitiveness of these technologies." HR 2112 constructively builds upon the President's request. In our opinion, the primary strength of HR 2112 is that it combines the resources of the public sector with the expertise of the private sector to forge new business opportunities for environmentally friendly goods and services.

Thank you, Mr. Chairman. My testimony is concluded.

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April 8, 1993

The Honorable Mickey Kantor  
U.S. Trade Representative  
600 17th Street, NW  
Washington, D.C. 20506

Dear Ambassador Kantor:

We are writing to propose for your consideration a mechanism, as part of the procedures of the North America Commission on the Environment (NACE), to resolve trade disputes based upon noncompliance with national, state and local environmental standards by allowing substantial participation by envirotech industry representatives from Canada, Mexico, and the United States in the dispute resolution process.

This proposal is similar to the proposal by Senator Baucus and others that would direct a NACE "consulting arm" to become involved in a trade dispute after NACE had completed an "investigation" and found "noncompliance." According to the Baucus proposal, the NACE consulting arm would call upon scientific and engineering consultants who would help to formulate a "compliance plan" that must be implemented within four months. Failure to carry out the compliance plan could lead to the imposition of "penalties" by the complaining government.

Our proposal would involve participation by the environmental industry in the United States, Mexico, and Canada much earlier in the process of addressing environmental compliance. If a business, industry, or government believes that it is at a competitive trade disadvantage because of noncompliance with existing environmental standards, an industry-lead task force, with sufficient governmental and public participation, would quickly conduct a study to make two determinations: (1) whether or not the company or industry which is the subject of the study possess the technological capacity to comply with applicable environmental standards, and (2) whether or not the capacity to effectively implement environmental management is a factor to be addressed in ensuring compliance. The task force would conduct its study and make its final recommendations by majority vote.

A finding by the task force that technological and management capacity are obstacles to compliance would require the task force to also propose remedies to be applied within a set time frame to address these obstacles. The failure of the industry or country to respond adequately to the findings of the task force

# Houston Chronicle

Tuesday, April 6, 1993

## We can have free trade and clean environment

By RODGER SCHLUCKEISEN

ONE of the most pressing questions facing the Clinton administration and the new Congress is whether to approve the North American Free Trade Agreement. Because NAFTA would phase out almost all trade barriers between Canada, the United States and Mexico, few decisions have the potential to exert more influence on the economy and environment of this continent. Even without NAFTA, these three countries last year exchanged goods and services valued at roughly \$150 billion. Considering that countries like Chile, Brazil and Argentina could join NAFTA by the end of the century, the pact's tentacles could eventually embrace the entire Western Hemisphere.

Few questions will be more contentious than NAFTA, since even environmentalists are not in agreement about the likely impact of this first free-trade pact linking the economies of developed and developing nations. There is little doubt that the current NAFTA draft, negotiated by the Bush administration, provides inadequate assurances that the pact would not make Mexico a haven for American industries eager to escape the United States' strict environmental regulations. Nonetheless, expanded free trade has the potential to break the chains of poverty of millions of people, while providing enormous new resources for investment in environmental cleanup and conservation. Fortunately, Mexico still has rich natural assets worthy of protection. But without improvement in Mexico's economy, any substantial source of money to finance large-scale conservation is hard to identify.

Thus, President Clinton is wise in taking a position between those who have called for outright rejection of NAFTA and those who have endorsed it as proposed. NAFTA should be approved, but only in conjunction with

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simultaneous approval of a comprehensive environmental supplemental agreement that must have the same legal status as NAFTA itself. The president has also called for supplemental agreements on labor rights and import surges.

What should the environmental side agreement do?

First, it must breach the tight secrecy to which the present NAFTA draft proposes to resolve trade disputes. Opening up the dispute process to public participation is desirable for its own sake and also would alleviate substantive concerns about the agreement.

Second, a sufficient and designated source of funds must be provided for proper infrastructure development, environmental enforcement and cleanup.

Third, there must be a more effective deterrent against U.S. industries that head south to escape our environmental law and regulations.

Fourth, there must be better international protection for all environmental agreements to which the United States is or will become a party.

Fifth, a strong North American Commission on the Environment must be created to monitor the environmental effects of the treaty and compel enforcement of existing standards. If laws already on the books are not enforced in Mexico, Americans will suffer both competitive and environmental injuries. In addition, strict enforcement would greatly benefit the burgeoning U.S. enviro-tech industries, creating thousands of new American jobs.

The side agreement also must deal with trade restrictions based upon methods of producing goods. As one example, the current NAFTA test

does not address the basis of the dispute between the United States and Mexico regarding the thousands of Pacific Ocean dolphins that continue to be killed by the Mexican tuna fleet. This dispute arose under the auspices of the multilateral General Agreement on Tariffs and Trade, when Mexico challenged the U.S. Marine Mammal Protection Act's ban on certain tuna imports. A GATT dispute-resolution panel then ruled that the import bans violated GATT, though the decision has not yet been adopted by the full GATT.

The main point, however, is that neither GATT nor NAFTA should prohibit the right of a country to impose non-discriminatory and trade-based conservation standards to protect resources outside its territorial jurisdiction, or to have some say regarding the producing methods used in goods it imports. If the United States and other leading nations do not look beyond their own borders to advance environmentally sustainable practices, we risk encouraging all trading nations to opt for the lowest common environmental denominator. Such practices undercut our laws and our producers. And if we permit trade-based conservation measures like our hard-won "dolphin-safe tuna" restrictions to be nullified by international trade agreements, we will foolishly deny ourselves a powerful and legitimate bargaining tool on behalf of the environment, namely access to the lucrative U.S. marketplace.

Trade and the environment need not be competing interests. But persuading free-traders and environmentalists to bury past grievances and to replace their old competitive relationship with a new symbiotic one will require real leadership from Congress and the White House. The first step is to negotiate a good NAFTA environmental side agreement.

could lead to the imposition of sanctions by the complaining nation through the NACE process as proposed by Senator Baucus, Representatives Wyden and Richardson, and members of the environmental community.

We believe that this enforcement approach has a number of beneficial features. First, the focus of attention pursuant to our proposal is on the underlying causes for the noncompliance with national environmental standards -- technological incapacity and management deficiency in industry and government -- and not entirely and initially upon the incident of noncompliance itself.

Second, environmental industry and business professionals in the three countries would initially take the lead in the task force conducting the study, with the public and governments also sufficiently represented. We believe that such industry-to-industry cooperation will help to successfully resolve potential trade disputes.


Third, if the task force finds that technological and management problems are serious obstacles to compliance with environmental standards, a plan to remedy such deficiencies will be quickly proposed for consideration by the industry and government that are the subject of the study.

Fourth, we believe that this proposal satisfactorily addresses the sovereignty issues that have been raised with respect to supranational investigatory powers of NACE in that it is quite similar to authority already granted by Article 506 of NAFTA. The ability of a complaining government to impose trade sanctions upon a government that fails to ensure that its environmental laws are complied with is the ultimate authority under our proposal, as it is under other enforcement proposals.


Additional issues, such as avoidance of conflict of interest by task force members and protection of confidential business information, can be satisfactorily addressed through the operation of well-known legal principles.

We believe that this proposal has the merit of changing the course of NAFTA enforcement from an adversarial process to a process that includes the private sector of each country in working to improve enforcement in a productive fashion. We would be pleased to discuss this proposal and will gladly provide additional information.

Sincerely,

  
Donald L. Connors  
Chairman

Environmental Business Council, Inc.

  
Rodger Schlickeisen  
President

Defenders of Wildlife



May 18, 1993

Mr. Bryan Samuel  
U.S. Trade Representative's Office  
North American Affairs  
Washington, D.C. 20506

-transmitted by facsimile-

Dear Bryan:

Thank you for briefing the environmental community this morning on the U.S. proposal to negotiate an environmental supplement to NAFTA. Despite some progress in several areas, there exist five major and outstanding concerns that need to be addressed if Defenders is to support the final NAFTA package. We note that each of these concerns was mentioned in both our March 4 and May 4 letters to Ambassador Kantor.

1. Process standards and environmental "exceptions" to NAFTA:

No trade agreement should preclude a country from establishing standards that apply to environmentally degrading activities outside its territorial jurisdiction, so long as the standard adheres to the basic trade principles of non-discrimination and national treatment. While we are encouraged by the Clinton Administration's present efforts to adopt and push such an understanding at the OECD and GATT, we are quite worried about virtually ignoring the process issue in NAFTA without concrete commitments by the Administration in those other trade forums.

If, for well-enunciated strategic reasons, the Administration decides to relegate the issue of process standards (as they relate to the environmental exceptions in NAFTA Article 2101) to a "NACE function," then the U.S. must secure agreement by Mexico to the provisions of the International Dolphin Conservation Act (IDCA) signed into law last Fall. Mexico has dragged its heels on this issue for too long and must be made to understand the seriousness of the U.S. position. We also remind you of the positive effects such a moratorium agreement would have upon the "Tuna/Dolphin II" case brought by the European Community against the U.S.

2. Enforcement:

The legal trigger of "persistent and unjustifiable pattern" is open to wide abuse. This term must be better defined-(or changed) if the NAFTA parties are to finally acknowledge that lax enforcement of environmental standards creates unfair competitive advantages and environmental degradation. We also object to the ability of the NACE Council to reject a Secretariat report for merely being "deficient."

3. Dispute settlement relating to Chapters 7 and 9:

We are very disappointed that no explicit reforms of the closed dispute resolution process under Chapter 20 were addressed by your proposal, particularly given that such changes could be made without renegotiating the actual text of the present NAFTA. We still maintain that you could break Article 2012's stranglehold on confidentiality by making an exception for challenges to "environmental" standards. Also, perhaps you could give the Public Advisory Committee an express role in disputes on environmental or conservation standards. We remind you that the American people will have a hard time accepting a NAFTA that can rule against democratically established federal, state, or local standards, particularly when such proceedings are closed to affected individuals.

Questions of openness and public accountability aside, the legal test utilized by a dispute panel in judging environmental and conservation standards will also be crucial. Thus, we again urge you to clarify GATT terms of art like "necessary," or have the NAFTA parties agree not to bring cases under Chapter 20 challenging a standard relating to pesticide residues or food contaminants except on the ground that the standard is discriminatory or a disguised trade barrier.

4. Relationship between the NACE Secretariat, the NACE Council, and the NACE Public Advisory Committee:

Overall, we think you have done a solid job crafting reasonable checks and balances between the Secretariat and Council. Nonetheless, just as some are concerned that the Secretariat is not accountable enough to the Council, we are concerned that the Secretariat is not accountable enough to the general public. We believe, therefore, that the Public Advisory Committee must have the ability to compel actions by the Secretariat in certain instances.

5. Community right-to-know:

We strongly believe that community right-to-know laws consistent with Article 10 of the Rio Declaration should be an explicit obligation of the NAFTA parties.



We hope you will share this letter with your colleagues at USTR, EPA, State, and the rest of the Clinton Administration. In making these comments, we have avoided rehashing our laundry list of concerns, and have instead focused on those issues apparently not addressed by the Administration's present proposal. As just one example, we want to ensure that issues relating to border cleanup and infrastructure needs receive the attention they deserve. (And, yes, we believe that USTR should change the procedure by which organizations like Defenders can look at documents such as the present proposal). Again, we reiterate that the May 4 letter from seven environmental groups to Ambassador Kantor is a bottom line document for us, in terms of the policy ends that document espouses.

Thank you for your consideration. Best of luck to you and the rest of the negotiators headed to Ottawa.

Sincerely,



William J. Snape, III  
Associate Counsel

cc: Richard Smith, State  
David vanHoogstraten, EPA  
Eileen Claussen, NSC  
Greg Mastel  
Karen Steuer

TESTIMONY SUBMITTED  
BY

EDMUND B. WOOLLEN  
V.P. GOVERNMENT MARKETING, THE RAYTHEON COMPANY

BEFORE THE  
SUBCOMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES  
(HOUSE MERCHANT MARINE AND FISHERIES COMMITTEE)

25 MAY 1993

**INTRODUCTION**

Thank you Chairman Studds and Members of the Subcommittee on Environment and Natural Resources for the invitation to appear before you on the issue of H.R. 2112, the "National Environmental Trade Development Act of 1993." I look forward to working with you to craft legislation that will help companies become world leaders in providing environmental goods and services. It's good for industry and our economy, and more importantly, good for our planet.

**BACKGROUND**

My name is Ed Woollen, Vice President for Government Marketing at Raytheon Company, headquartered in Lexington, Massachusetts. My educational degree is in oceanography, and I am principally engaged in business development and marketing of electronic and computer based systems for federal and local governments.

Raytheon Company is a \$9 billion diversified technology company with sales in four business segments -- electronics, aircraft products, major appliances, and energy and environmental programs.

I'd like to briefly tell you about our environmental capabilities.

In the electronics sector we are pursuing several markets where automatic sensors are used for environmental monitoring.

In appliances, we have been a leader for many years in energy efficient products and are working to meet the upcoming federally mandated reductions of ozone depleting substances.

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E. Woollen, Raytheon  
25 May 1993

In energy and environmental services, we operate worldwide to serve the petroleum, petrochemical, chemical, power, food processing, infrastructure development and environmental services markets.

Environmental systems, such as industrial wastewater treatment and air pollution control, are increasingly an important part of all of the plants that we design and build for our customers worldwide.

I want to point out, too, that in our own manufacturing processes, we have reduced chemical releases to the environment by 64 percent between 1987 and 1992, and we have nearly eliminated all use of ozone depleting solvents.

Raytheon Company actively exports to the global market from all of its operating units and in 1992 18 percent of our sales were from overseas clients.

#### **RAYTHEON'S SUPPORT FOR INTERNATIONAL ENVIRONMENTAL TRADE**

It is with this company experience in mind that Raytheon is pleased to have been invited here today to testify on the development of this environmental technology education and assistance program.

From our travels in the international marketplace we know that there is a great need for education, consultation and products aimed at cleaning up past environmental damage and to minimize human impact to Planet Earth.

We have the technology, resources and organizational skills here in the United States to become global leaders in environmentally sustainable urban and industrial development. As a nation, we've shown our skills to return rivers and lakes to pristine condition, to dramatically cut air pollution in places like the Los Angeles basin, to develop clean burning coal power plants, to cut the use of ozone depleting substances in our manufacturing processes, and to take many other steps that are environmentally sound and socially responsible.

These capabilities have worldwide market value. If we can take them to the global market in an efficient way, then environmentally related technology, products and services will enjoy a very positive balance of trade and create high skill, high wage jobs here in our country.

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 E. Woollen, Raytheon  
 25 May 1993

The "National Environmental Trade Development Act", when signed into law will be of great assistance to private industry. It will

- assist the envirotech industry to learn the ropes of international commerce,
- it will put environmentally focused business assistance for the envirotech industry in the Department of Commerce, around the nation and in key countries around the world,
- and through the very innovative provision of an Environmental Service Corps within the Peace Corps, it will speed up environmental awareness in environmental challenges.

Therefore, Mr. Chairman and Members of the Committee, Raytheon Company strongly supports your efforts and vision to enact this bill into law. In fact, in the spirit of making this legislation even more effective, we'd like to offer two recommendations for your consideration.

We recommend that you consider including all industry under the jurisdiction of this bill -- not just small and medium sized businesses. I say this because big industry can contribute tremendously to the growth of businesses of all sizes. We are served by a skilled subcontractor and vendor base which means that when we win an international order, our vendor base wins, too.

In addition, I would urge you to consider establishing a mechanism to foster environmental technology demonstration sites where we in industry could develop and demonstrate high technology solutions to remediation challenges around the world. Such a program might take advantage of military sites slated for closure. In order to participate in such a program, these sites would have to be exempted from some provisions of CERCLA.

We are behind your efforts and I am prepared to answer any questions you might have.

Thank you.

**TESTIMONY OF  
JOHN T. SCHOFIELD  
PRESIDENT AND CEO OF THERMATRIX INC.  
3590 NORTH FIRST STREET  
SAN JOSE, CALIFORNIA 95134  
Phone 408 944-0220  
Fax 408 944-0292**

**BEFORE THE  
SUBCOMMITTEE ON ENVIRONMENTAL AND NATURAL RESOURCES  
U. S. HOUSE COMMITTEE ON MERCHANT MARINE AND FISHERIES**

**MAY 25, 1993**

Thank you Mr. Chairman and members of the Subcommittee for inviting me as an environmental technology developer, and as a representative of the Environmental Equipment Manufacturers' Association, to participate in a hearing on the National Environmental Trade Development act of 1993. It is my strong belief that unless action is taken to organize a concerted effort between private industry and government in the commercialization and application of environmental technology, the United States will continue on its existing path of being a developer and exporter of environmental technology rather than a manufacturer and exporter of environmental equipment and products. The proposal outlined in H.R. 2112 will set in motion a strategy to redirect the current focus with the resulting creation of a significant number of engineering and manufacturing jobs in the United States. At the same time, the significant added value of exporting equipment rather than technology can play a major role in reducing the current trade deficit.

**Background**

I am the President and CEO of Thermatrix Inc, a small private company based in San Jose, California. After 12 years of research and development and the expenditure of some \$33 Million in funds from various sources, the Company entered the commercialization phase of its technology in May of 1992. The technology, which is a replacement for incineration, has had a unique acceptance in the marketplace, but in order for the company to survive while it builds and demonstrates its first units, significant additional financing is required. Many tempting offers have been received from overseas to sell the company or license the technology during this period.

The initial commercial introduction of the technology has been in air pollution control, dealing with the destruction of hazardous air pollutants from vent streams, the current solution to which has been the use of fume incinerators or flares. As such, the company competes in the air pollution control market segment, one of the fastest growing segments of the environmental business, currently projected in the United States at a market size of \$5.3 billion per annum and growing at the rate of 25% per year. This market segment which is projected to be the fastest growing segment on a global basis, has attracted foreign interests to the United States which has taken the leadership in the development of new environmental technologies. As a result, today, over 70% of air pollution control technologies employed in the United States are controlled by foreign firms and interests and the current acquisition focus by these foreign entities is extremely active, a fact to which I can personally attest.

It is clear that the same foreign interests which are acquiring these technologies do not intend to manufacture equipment embracing these technologies in the United States for export overseas. Rather their intent is to gain a dominant share of the United States market with these technologies and also take the technology overseas for incorporation into manufacturing in those other countries including Europe and the Far East. This fact is at the crux of the misunderstanding that exists concerning the global marketplace for environmental technology. While the total marketplace is huge and is expected to grow to \$300 billion per year by the year 2000, the ability for the United States to participate in this growth and create jobs within the United States will only be achieved if the technology is incorporated into equipment here and that equipment is exported from the United States rather than the export of technology. Exporting environmental technologies either by licensing or by the sale of small technology development companies also results in exporting engineering and manufacturing jobs which will never return to the United States.

## **Increased Public/Private Cooperation**

After years of adversarial relations, government and industry are beginning to recognize that they must cooperate to meet their different goals. As the government is forced to comply in its federal facilities with the same regulations and permitting procedures faced by the private sector, there is a new appreciation of the difficulties facing the private sector in the commercialization and application of new environmental technology.

The solution to date has been to spend yet more money in research and development of new environmental technologies particularly through the increased use of federal programs with the DOE and the DOD and through the use of tremendous resources existing in the National Laboratories. While this is commendable, it will not address the real issue as to why it is that companies and federal facilities are forced to deploy "foreign" technologies to solve their environmental problems. The fact is, the technologies they are using in many cases were originally developed in the United States but now have foreign ownership.

The continued priming of the research and development pump for environmental technology without resolving the problem as to why these technologies are not retained in United States ownership is an ineffective use of government and private funds in furthering job creation and export potential. My experience in the environmental manufacturing area would suggest that at least 9 engineering and manufacturing jobs are created for every one in research and development. Government and private industry need to cooperate and focus attention on solving the problems associated with the commercialization of environmental technologies domestically so that the growth which occurs in the application of the technology provides jobs and exports here in the United States.

## **Export of Technology**

Although considerable funds are available for research and development, virtually no government funding is available for the commercialization of

environmental technology. Similarly, venture capital firms will invest in research and development but in many cases see the maximum value of their investment materialize just prior to the commercialization phase, which leads to a sale or licensing of technology and equipment. The reason this is so is due to the absence of a clearly defined program for the certification of environmental technology and equipment. The absence of such a program makes it difficult to sell technology and equipment with a guarantee of its permitting acceptance.

I can best describe the problem by drawing an analogy with the U. S. pharmaceutical industry which has a leadership position in the world both in the research and development of new products and in their subsequent sale on a worldwide basis. For simplicity purposes, as the pharmaceutical analogy, I will assume that I am the inventor of aspirin and wish to get approval for this product. Having designed the product I can enter a known process with the FDA which, although long and expensive, provides me with a clearly defined path from which I will eventually emerge with either an approved product or an unapproved product. There are clearly defined milestones along the path. As I pass these milestones, I am able to obtain funding from clearly defined sources. Assuming I emerge from this process with an approved product, I am then able to market this product on an extensive basis as the customer has faith in the certified product.

Compare this, then, with my situation as a developer of air pollution control technology. Having developed the technology, there is no formal certification process to go through which provides me with a product approved for certain applications. Instead, I am forced to go from door to door to try and encourage companies to purchase one of my units and try it. Due to the severe penalties for non-compliance, users often will not allow unproven environmental technologies to be used on their premises. Those testing innovative technologies are given no compliance relief for a "best efforts" user. Compliance, assuming a permit to even try the technology can be obtained in the first place, and liability concerns, allow little room for error. Furthermore, I have to go through this process for each sale of my equipment because the permit requirements are different in different states and in many cases even in different parts of the same state. Thus in comparison with the aspirin example, I am in the unenviable position of trying to sell an uncertified product which requires a user to obtain a



permit every time he wants to use it, and, if he wishes to use it twice, he must obtain two permits. This requirement to obtain a permit for each use or application never ends throughout the entire life of the technology.

It is not surprising, therefore, that, to the investor, the maximum value of the technology is just prior to the commercialization phase. The foreign investor sees the situation somewhat differently in that he is able to purchase an environmental technology for a fraction of the dollars expended in research and development and take that technology back to his own country for application and subsequent re-export to the United States.

### **Solutions - New Strategy Required**

I am testifying today in support of this Bill because I strongly endorse the establishment of a framework to bring together appropriate government agencies and private industry to develop and implement a strategy which will insure the commercialization and implementation of environmental technology within the United States and subsequently on a global basis. I believe the establishment of an Environmental Trade Promotion Council of the United States, as envisaged, should have the capability to devise an appropriate strategy to be implemented through the proposed Regional Centers. However, I would strongly recommend that the functions of the Council as outlined in Section 6 (d) (1) be changed from "develop a national strategy to increase exports of United States environmental technology (including marine biotechnology), goods, and services;" to read "develop a national strategy to increase exports of United States goods and services involving United States developed environmental technology", rather than increasing the exports of United States environmental technology itself. Frankly, the latter needs no further encouragement.

I would be pleased to assist further in the development of a national strategy and its implementation.

**TESTIMONY OF  
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BEFORE THE  
SUBCOMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES  
U.S. HOUSE COMMITTEE ON MERCHANT MARINE AND FISHERIES  
  
MAY 25, 1993**

Thank you Mr. Chairman, Representative Furse and other members of the Subcommittee for inviting myself and the Oregon Environmental Technology Association to testify on H.R. 2112, the "National Environmental Trade Development Act of 1993". On behalf of OETA's members, our industry colleagues in the Pacific Northwest, and throughout the U.S., I want to acknowledge and express our deep appreciation for your timely and necessary legislation to support the U.S. envirotech industry, provide for the development and implementation of a national strategy to encourage and promote opportunities for the private sector to provide environmental goods, services and technology to a rapidly expanding global market.

**BACKGROUND ON THE OREGON ENVIRONMENTAL TECHNOLOGY ASSOCIATION**

The OREGON ENVIRONMENTAL TECHNOLOGY ASSOCIATION (OETA) is a private, non-profit industry organization formed in 1991 to increase public and governmental awareness about the industry and the unparalleled opportunity for economic growth our industry provides, increase the visibility of the industry in international markets, develop linkages and build alliances regionally and nationally, and form partnerships with government to realize the opportunities presented in the rapidly expanding global marketplace for environmental goods and services. OETA is committed to supporting companies identify and access markets, develop and provide effective, responsible environmental management, products, services and technology that enhance business and economic objectives. OETA is actively collaborating with academic and research institutions, state and federal governmental agencies, the Washington Environmental Industry Association, and the Pacific Northwest Economic Region in pursuing its goals.

The Pacific Northwest Economic Region includes the states of Oregon, Washington, Idaho, Montana and Alaska and has as a primary objective the establishment of the region's environmental industry as a primary supplier of environmental goods and services to the world.

It is clear that greater coordination of U.S. government policies and programs to support and assist the environmental industry is necessary. OETA supports the increased coordination called for in H.R. 2112 under the Department of Commerce. All federal agencies including EPA, the Army Corps of Engineers and others should also be included as they also have significant impact with regard to the growth and competitiveness of the U.S. environmental industry.

OETA supports the creation of the environmental Trade Promotion Council and the development of a national strategic plan for the industry. We cannot emphasize too strongly the critical need for private sector and industry participation on the Council, and encourage the Subcommittee to increase private, for profit participation to at least 50%.

OETA prefers the language in an earlier version of H.R. 2112 that called for matching funds for "Regional Consortia" as opposed to the "regional cooperation centers" called for in the current bill. It is critical that industry, private and public organizations active and involved in the support and development of the U.S. environmental industries export and marketing activities be allowed to fully collaborate and coordinate on a regional basis. Funding a "center" may proscribe all qualified businesses and organizations in a region from developing and carrying out the most far reaching action plans. Again, for profit businesses and industry organizations need to be fully empowered to maximize the effectiveness of limited resources in a highly competitive global marketplace.

OETA supports the establishment of a senior-level environmental service corps within the Peace Corps. International trade is a process, not an event, and requires the careful and sustained building of relationships. OETA has hosted several delegations-- from Mexico, Russia, Taiwan, China, India, Hungary and elsewhere-- this week a delegation from Honduras is visiting Oregon specifically to learn about our industry's expertise with regard to water quality, sanitation, sustainable forestry and biodiversity. Oregon is blessed with private and public sector expertise in these (and other) areas of the environmental industry.

OETA is supportive of U.S. business centers abroad, however Oregon international trade efforts have already made effective use of Embassy and Consulate offices. US-AEP has also opened such business offices dedicated to increasing U.S. industry access to environmental markets in Asia. Are we re-inventing the wheel here?

In conclusion the opportunity and challenges are great. Increased coordination and federal support is critical to meeting these challenges and realizing the significant opportunities. Our concern is that Oregon and the Northwest, distant from the Capitol and the "Beltway" may be overlooked and undervalued for the groundwork and progress already achieved. Please lend us the support and assistance we so urgently need, and let private industry continue to lead the effort to realize the rewards of the world's growing marketplace for environmental goods and services.

Thank you!

OETA's membership includes the largest environmental company in the world (CH2M Hill), Battelle Pacific Northwest Laboratory, analytical laboratories, consulting scientists and engineers, research and technology development companies, and manufacturers of equipment and technology. Many are already active internationally, while others have experienced real barriers to exporting their goods and services, others fear perceived and real barriers.

#### COMMENTS ON H.R. 2112 THE NATIONAL ENVIRONMENTAL TRADE DEVELOPMENT ACT OF 1993

While estimates on the size of national and international markets may vary, there is widespread agreement that the markets are large, and with respect to the global market, that the market is growing rapidly. There is also agreement that international competition is strong and significant.

Oregon has gauged its environmental sector at 2.8% of the state's gross domestic product and contributing over \$600 million to the state's 1992 payroll. State economists have projected that employment in the industry will continue to grow at 4% for the remainder of the decade. OETA believes that greater growth can be realized with fast and coordinated action on the part of industry, government and academia.

Markets for environmental goods and services are everywhere-- including Mexico, Latin and South America, all of Asia and the Pacific Rim, as well as Eastern and Western Europe, Russia, the Newly Independent States and Canada. Many state and federal government agencies have recognized the significant potential to export U.S. environmental goods and services. OETA believes that additional collaboration and coordination of private and public efforts are needed to realize the very sizable export potential in the years and decades ahead.

Public and private organizations and institutions have come to recognize the direct connection between economic health and environmental quality. The World Bank concludes in its 1992 World Development Report that "The value of the environment has been underestimated for too long, resulting in damage to human health, reduced productivity, and the undermining of future development prospects". The report argues that "continued, and even expanded economic and human development *is* sustainable and can be consistent with *improving* environmental conditions, but that this will require major policy, program, and institutional shifts".

The report concludes that "win-win" links between efficient income growth and the environment need to be exploited including removal of "distortionary policies that encourage the overuse and undervaluation of natural resources", and that "strong policies and institutions need to be put into place which cause decision makers-- corporations, households, farmers, and governments-- to adopt less-damaging forms of behavior". Both types of policy are essential to global economic and environmental health and sustainability.

STATEMENT FOR THE RECORD OF JOHN P. HOGAN, ACTING DIRECTOR,  
PEACE CORPS, ON H.R. 2112, THE NATIONAL ENVIRONMENT TRADE  
DEVELOPMENT ACT OF 1993

SUBCOMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES  
COMMITTEE ON MERCHANT MARINE AND FISHERIES  
UNITED STATES HOUSE OF REPRESENTATIVES  
MAY 25, 1993

Mr. Chairman:

Peace Corps is pleased to have this opportunity to share with the Subcommittee our views on the provision in the National Environmental Trade Development Act of 1993, H. R. 2112, which would establish a senior-level environmental service corps within Peace Corps.

We strongly support the goal of providing experienced environmental professionals to assist developing countries and emerging democracies to plan and implement environmentally sound sustainable development programs. This has been an important part of Peace Corps' mission for many years, but we do not believe it is necessary to create a specific division within Peace Corps to accomplish the goal.

Peace Corps already has a sizeable force of skilled environment advisers serving in every corner of the globe. In Fiscal Year 1993, we will field close to 800 environment Volunteers in nearly sixty countries--that's one of the largest environmental work forces of any international development organization.

Peace Corps' programs are driven by the needs and requests of our host countries. It has long been the Agency's view that effective development programs cannot be imposed from above or outside, but must evolve in response to problems identified by the countries themselves.

As the international community has grown increasingly aware of the vital link between sustainable development and global protection, we have witnessed a dramatic increase in requests for environment Volunteers. Our environmental sector has grown from fewer than 300 Volunteers in 1986 to a projected high of just over 1000 in 1995. Peace Corps' carefully targeted recruitment system has allowed us to meet this increased demand for skilled environment Volunteers, and we look forward to breaking that 1000 mark in 1995 if resources permit.

The rapid expansion of Peace Corps environmental work is not limited only to Volunteers who serve in that sector. Indeed, the growing commitment to global environmental protection has also sparked an increase in environment related activities among Volunteers who serve in our agriculture, education, health, small business and urban development programs. Environmental concerns cut across all these sectors, and many of our host countries have encouraged integration of environmental protection principles into Peace Corps' programs in these other areas.

Page Two

Our programming in every sector, including the environmental sector, is built on the principle that sustainable development begins at the grass roots level and builds up. During our thirty-two years of experience in the developing world, we have found that direct, people-to-people assistance at the local level is the most effective form of foreign aid. Our best programs are those that have been initiated at the community level.

We have also learned through experience that long-term commitment, good language skills and cross cultural understanding are often as important in the development process as technical competence or the technology itself. If a project is to take hold and flourish, if it is to have a life beyond the tour of the technical advisor and be sustainable over time, then the local people must be involved in every aspect of project planning and implementation.

Because strong relationships with local communities are the key to success, Peace Corps has put great emphasis on language and culture in our training programs. And because it takes time to build these relationships, we ask our Volunteers to make a two-year commitment and live among the people they serve. The closer the advisers are to the people, the greater the chance for sustainable change.

Traditionally, Peace Corps' host countries have requested environment Volunteers in five areas: forestry extension, Forest Management, Environmental Education, National Parks-Biological Diversity, and Wildlife Management.

Forestry extension Volunteers are involved in a variety of projects including tree nursery development and management, fruit tree planting, watershed management and agroforestry promotion projects. Volunteers assigned to forest management programs work in host country forestry agencies with forest wardens and rangers, timber-harvest supervisors, silviculturists, forest fire suppression teams and forest pest researchers to promote sustainable forest management projects. In some cases, Volunteers are teaching at national and regional universities and technical colleges.

Environmental Education is Peace Corps' fastest growing environmental program and a critical component of all our

## Page Three

environmental activities. Volunteers participate in both formal and non-formal education activities such as curriculum development, teaching university environmental education courses, developing media campaigns and other programs to promote natural resource conservation at local and regional levels, and environmental teacher training.

It is in this area of environmental education that Peace Corps has been most successful in integrating environmental initiatives into other sectors. Peace Corps' science, math and English teachers work with their host country counterparts to incorporate environmental issues into their curricula. In Botswana, Central Europe, the Eastern Caribbean, Fiji, Gabon, Malawi, Tonga and Western Samoa, more than 200 Volunteers and host country teachers participated in training workshops to enhance environmental education in the classroom and improve instructional techniques. Participants were given state of the art environmental education materials and taught techniques to adapt these materials to their country and specific grade level.

Just as our host countries have begun to emphasize environmental education at every academic level, many have also taken serious strides to protect and support their national parks and slow the loss of biodiversity. Peace Corps Volunteers, working with their host country counterparts, have been helpful in identifying potential reserve locations, surveying and marking protected area boundaries, conducting flora and fauna surveys, training natural history interpreters, establishing visitor centers and museums and preparing tourism and general mangement plans.

To complement the work being done with national parks and biodiversity, Peace Corps' Wildlife Management Volunteers work with their counterparts on biological inventories, species studies and habitat recovery and management plans. Their projects support host country efforts to protect threatened and endangered species and promote sustainable wildlife activities that provide food and income to local communities.

While a great deal of work remains to be done in these more traditional environmental programs, urbanization in the developing world is presenting an increasingly severe environmental challenge for many of our host countries. In response to requests for technical assistance in urban areas, Peace Corps has initiated projects dealing with pollution and solid waste management.



Page Four

Peace Corps environment programs--both traditional projects and new initiatives--are underway in all four regions in which Volunteers serve. In Senegal, Volunteers have targeted 300 villages for tree planting, promotion of environmentally sound cookstoves and environmental education in schools and rural communities. Volunteers in Sri Lanka are teaming up with that country's Department of Wildlife Conservation to develop environmental education materials for primary and secondary schools, while Volunteers in Costa Rica are concentrating on a forestry project aimed at increasing reforestation by 150,000 acres and training 25,000 farmers in reforestation by the end of FY 97.

Shortly after the collapse of the Soviet bloc, Peace Corps was invited into Eastern Europe, a region suffering from severe environmental degradation. We have begun environmental education and environmental management programs in Poland, Hungary and the Czech and Slovak Republics and plan to launch similar initiatives in Russia and the Newly Independent States when resources permit.

The global environmental problems we are all grappling with are very complex, and the solutions can be costly. To take full advantage of environmental expertise in other federal agencies and maximize the effectiveness of limited foreign assistance resources, Peace Corps has been working for some time with the National Park Service, Fish and Wildlife Service, U. S. Forest Service and, more recently, the Environmental Protection Agency.

The longest collaborative relationship has been with the Agency for International Development. For the past eleven years, Peace Corps and AID have carried out a unique program of interagency cooperation which has been particularly valuable in the environmental sector. Peace Corps Volunteers receive technical support from AID and some projects receive financial support. In turn, AID, through the Volunteers, has much greater access to the communities most in need of assistance and receives useful evaluations from the field on the effectiveness of its projects.

Page Five

It will take tremendous energy, drive and commitment on the part of every member of the international community to pass on a safer, healthier world to our children. When Vice President Gore spoke to the United Nations Conference on Environment and Development in Rio de Janeiro last summer he said, "It is time for us to be as concerned about the road from Rio as we have been with the road to Rio." Peace Corps environmental volunteers and their host country counterparts helped build that road to Rio. With the continued support of Congress and the American people, and working side by side with our global partners, we will continue to be at the forefront of international efforts to protect this planet's fragile environment.

STATEMENT FOR THE RECORD  
OF  
SUSAN F. TIERNEY  
ASSISTANT SECRETARY  
OFFICE OF POLICY, PLANNING AND PROGRAM EVALUATION  
U.S. DEPARTMENT OF ENERGY

MAY 25, 1993

BEFORE THE  
SUBCOMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES  
OF THE  
COMMITTEE ON MERCHANT MARINE AND FISHERIES  
UNITED STATES HOUSE OF REPRESENTATIVES

Mr. Chairman and members of the Subcommittee, I appreciate the opportunity to provide a statement for the record on behalf of the Department of Energy and Secretary O'Leary regarding the proposed legislation H.R. 2112, entitled the National Environmental Trade Development Act of 1993.

A broad view of the Clinton Administration's environmental policies and proposals are clearly delineated in the President's Earth Day Address of April 21, 1993, a copy of which is provided for the record as an attachment to this statement. The Secretary of Energy strongly supports these policies and proposals and likewise supports efforts consistent with and supportive of the President's initiatives in this area. In particular, the Department fully supports the proposition that the public and private sectors should develop and implement a national strategy to encourage and promote opportunities for the United States to provide environmentally sound technologies, goods and services to the global market.

#### **National Environmental Trade Development Act of 1993**

The proposed legislation, H.R. 2112, directs the President to coordinate the programs of Federal agencies aimed at encouraging exports of environmental technologies; establishes an Environmental Trade Promotion Council consisting of 19 public and private sector members; authorizes the Secretary of Commerce to designate up to six Regional Environmental Business and Technology Cooperation Centers in the United States; establishes a division within the Peace

Corps to be known as the Senior Environmental Service Corps; authorizes the Secretary of Commerce to establish American Business Centers and Environmental Business Centers in foreign countries; and authorizes a total of \$11.5 million for each of fiscal years 1994 through 1998 to carry out the provisions of the Act.

### **National Environmental Strategy**

More specifically, Section 4 of the bill directs the President to establish an Environmental Trade Promotion Council, whose purpose, as defined in Section 6 of the bill, is to develop a national strategy to increase exports of environmental technologies, goods and services, and prepare an action plan for strategy implementation by April 30, 1994. Membership of the Council consists of seven members from the Federal Government (Department of Commerce, Department of Energy, Environmental Protection Agency, Agency for International Development, Trade and Development Agency, Export-Import Bank of the United States, Overseas Private Investment Corporation) and 12 members from industry, labor, state government, consumer protection and environmental conservation groups.

The Department agrees with the purposes of Sections 4 and 6 of the bill aimed at developing a national environmental strategy. The Department strongly supports participation of outside interests and representatives, such as those named in Section 6 of the bill, in developing such a strategy.

To that end, the President has already directed the Department of Commerce to lead an interagency effort, which includes the Department of Energy as a key participant, to develop and implement a Federal strategy aimed at encouraging exports of environmental technologies, goods and services. In support of this effort, the Department of Energy envisions itself as making important contributions three areas: providing technical leadership in the research, development, demonstration and commercialization of environmental technologies; working closely with the Environmental Protection Agency on technology, associated research and regulatory issues; and cooperating with the Department of Commerce on technology commercialization and export promotion.

In its technical capacity, the Department of Energy conducts research and development of a broad range of energy and energy-related environmental technologies that are likely to have a profound effect on environmental quality. This includes efficiency and renewable technology, clean coal technology, ultra-clean natural gas utilization technology, fuel cells for both transportation and electricity generation, environmental restoration and waste management technologies, and a variety of other research on process technology and advanced materials. These programs afford numerous opportunities for export and foreign trade. Further, in the Department's environmental restoration and waste management programs and health and environmental research programs, there

are a number of initiatives focused on the export of technologies as required under provisions of the Energy Policy Act of 1992 and the Export Enhancement Act of 1992.

### **Related Department of Energy Programs**

Three examples of the Department of Energy's participation in programs serving these needs are the Committee on Renewable Energy Commerce and Trade (CORECT); the program for Assisting Deployment of Energy Practices and Technologies (ADEPT); and the Trade Promotion Coordinating Committee (TPCC) operating under the leadership of the Department of Commerce.

The Committee on Renewable Energy Commerce and Trade (CORECT) is an interagency working group of fourteen Federal agencies, whose purpose is to facilitate the cost-effective use of domestically produced renewable energy and environmental technology products and services around the world. CORECT was formed under the Renewable Energy Industry Development Act of 1983, and expanded under the Renewable Energy and Energy Efficiency Technology Act of 1989. Chaired by the Secretary of Energy, CORECT brings together potential users, decision makers, funding sources and industry to ensure that technologies made in the United States are considered for applications worldwide. CORECT members include the Departments of Energy, State, Commerce, Defense, Interior, and Treasury, and the Environmental Protection Agency, Agency for International Development, U.S. Information Agency, Small Business

Administration, U.S. Export-Import Bank, U.S. Trade Representative, Overseas Private Investment Corporation and industry representatives.

The CORECT program is administered by the Department of Energy's Office of Energy Efficiency and Renewable Energy, and has been particularly successful in aiding industry in the areas of market identification, technical assistance to foreign customers of U.S. technologies, and creating innovative financing packages to assist overseas customers to purchase U.S. renewable energy products and services. In 1992, CORECT activities were associated with the successful conclusion of more than \$245 million in U.S. technology sales.

The Committee on Energy Efficiency Commerce and Trade (COEECT) is the analog to CORECT for energy efficiency technologies. COEECT was established under Section 1207 of the Energy Policy Act of 1992, and is still in the development stage. The Department is identifying constituent industry groups and key players and exploring potential interest in Federal assistance in developing a strategic plan to support the export of energy efficient products and services.

Both the CORECT and COEECT programs are efforts to define and specify foreign markets for environmental technologies which are ready for commercialization. Three key markets identified by industry for emphasis in the near-term are Mexico and Central America; the Pacific Rim, particularly in the regions of the Association of South East Asian Nations (ASEAN) countries; and Eastern Europe and the Newly Independent States of the former Soviet Union.



The Assisting Deployment of Energy Practices and Technologies (ADEPT) program provides support to developing countries and the Newly Independent States in developing policy making capabilities in the energy sector. These capabilities are expected to result in better decision-making processes for energy investment options. The ADEPT program lays the groundwork for future technology-related export opportunities. Activities are principally carried out by the Department's national laboratories in partnerships with private sector participants.

The Department of Energy serves on the interagency Trade Promotion Coordinating Committee (TPCC) and participates in several TPCC working groups concerned with the promotion of energy and environmental technologies. For example, the Department chairs the Clean Coal Technology Subgroup, which was established under the Energy Policy Act of 1992. The TPCC, chaired by the Secretary of Commerce, was established by statute in the Export Enhancement Act of 1992 to coordinate the export promotion and financing activities of the U.S. Government, and to develop a government-wide strategic plan for carrying out these programs.

### **Supporting Technical Programs of the Department of Energy**

Aside from these programs aimed explicitly at exports and trade promotion, the Department is responsible for research, development, demonstration, and commercialization of technologies, specifically aimed at environmental

assessment, monitoring, and remediation. The Department's Office of Environmental Restoration and Waste Management, for example, is investing \$365 million in FY 1993 in environmental technology development.

To disseminate the results of this investment, the Department has co-sponsored recent conferences in Budapest and Berlin, and is planning meetings in Prague, St. Petersburg, and Budapest to highlight U.S. public and private sector capabilities in environmental restoration and waste management. The Department has concluded its first international Cooperative Research and Development Agreement (CRADA) between Oak Ridge National Laboratory and Ogden Environmental and Energy Services to conduct environmental remediation work in Germany.

The Department's health and environmental research programs, administered by the Office of Health and Environmental Research, dedicate \$338 million for research on human and environmental health. Technologies for remediating ground water, restoring ecological systems, predicting climate responses to atmospheric pollution, and monitoring air quality in homes and the work place have been and continue to be commercially useful. The development and transfer of technologies to address human health problems, sometimes linked to environmental quality, are integral to the Department's research efforts to develop the structure of new and novel proteins helpful to the pharmaceutical industry.

The Department's Human Genome Program has developed numerous technologies of potential commercial value to human health, and applicability to the resolution of some environmental problems. These technologies have led to CRADA's and several commercial applications. The Department supports the management of human genome data banks and interpretive software that are broadly available for research and commercial use. These technologies have led directly to an environmental application within the Microbial Genome Program. This program uses genomic information of industrially important microorganisms to address environmental problems.

The Department's Clean Coal Technology Demonstration Program, administered by the Office of Fossil Energy, represents a \$5 billion collaborative, cost-shared effort between the Federal Government and industry to develop and demonstrate a new generation of environmentally sound innovative coal processes with near-term commercial export potential. A Clean Coal Export Promotion Committee has been established to assist U.S. firms that have developed these technologies to identify and capture international market opportunities. Assistance focuses on supporting feasibility studies for advanced clean coal technology export projects, and providing financial assistance to U.S. firms working in developing or transitional market economies.

### **Market Assessment Activities of the Department of Energy**

Section 5 of the bill directs the Secretary of Commerce to undertake a number of policy reviews of programs under Commerce purview and establish a number of so-called "1-stop-shops" to provide market information to businesses selling environmental technologies, goods and services. The Department of Energy defers to the Department of Commerce on the provisions of Section 5.

In related activities, the Department recently completed environmental surveys and market assessments of Germany, Poland, Hungary, and the Czech and Slovak Republics. Future reports are planned for France, the Netherlands, Japan, Taiwan, and South Korea. All reports are to be made available to United States' businesses through the Eastern European Business Information Center in the International Trade Administration of the Department of Commerce.

In addition, the Department of Energy and the Environmental Protection Agency jointly supervise the U.S. Country Studies (USCS) program, which uses grants and technical assistance, to help developing countries and countries in transition to meet their obligations under the United Nation's Convention on Climate Change. Funds are used to determine national inventories of greenhouse gases, estimate potential vulnerability to climate change impacts, and evaluate measures to reduce greenhouse gas emissions and to adapt to change. We anticipate that findings often will identify specific needs for U.S. technology to assist in meeting the environmental objectives of these nations.

### **Regional Centers**

Section 7 of the bill requires the Secretary of Commerce to establish up to six Regional Environmental Business and Technology Cooperation Centers and to provide matching funds to such centers to provide export assistance to environmental firms. The Department of Energy is concerned that the mission of these Regional Centers , if they were to be established, should be coordinated with the Department of Energy's existing six Regional Technology Transfer Centers, and the Energy Efficiency Centers in Eastern Europe and in the Newly Independent States of the former Soviet Union. Our Centers provide comprehensive technology transfer and economic development services to regional and foreign technology users by providing, among other activities, toll-free telephone access to over 1800 databases and 35 document retrieval sources. The scope of work of these existing Centers could easily be expanded to carry out the objectives of H.R. 2112, thereby reducing Federal operating costs and overlapping functions.

### **Trade Assistance in Foreign Countries**

Sections 8 and 9 establish within the Peace Corps a division to be known as the Senior Environmental Service Corps and authorizes the Secretary of Commerce to establish American Business Centers and Environmental Business Centers in foreign countries. The Department of Energy defers to the positions of the Peace Corps and Department of Commerce on these provisions of the bill.

## Conclusion

In conclusion, the Department agrees with the findings, goals, and objectives of the proposed legislation. We agree with the need for a coordinated interagency effort to develop a national strategy to encourage and promote private sector opportunities in the export of U.S.-made environmental technologies, goods and services. We also note that the Department is active in this area, with many ongoing programs contributing directly to the goals and objectives of the proposed legislation. In addition, we welcome all opportunities to better coordinate and integrate our programs with those of the Department of Commerce, the Environmental Protection Agency, and other Federal Agencies in support of the Administration's environmental policy. Finally, we would be delighted to work with the Subcommittee to achieve as many of its recommendations as we can within the context of our ongoing national programs.

The President has already taken the lead to develop a comprehensive national environmental strategy, with a central thrust aimed at increasing opportunities for export and trade of environmental technologies, goods and services. One of our concerns is that legislation not limit the Administration's flexibility in moving forward in this critical area. The Department of Energy believes that the objectives of this legislation can be most effectively achieved within existing authorities and advisory mechanisms, and by recognizing that each agency,

including the Department of Energy, has numerous ongoing programs already addressing the goals and objectives of H.R. 2112.

This concludes my statement. I would be happy to respond in writing to any questions you might have.

Attachment: President Clinton's Earth Day Address of April 21, 1993.

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ADDRESS BY PRESIDENT BILL CLINTON  
CONCERNING EARTH DAY

BOTANICAL GARDENS, WASHINGTON, DC

WEDNESDAY, APRIL 21, 1993

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PRESIDENT CLINTON: (Applause.) Thank you. Thank you. Thank you  
very much, ladies and gentlemen, for being here in the wonderful Botanical  
Gardens. I must say there's a lot I have to learn about this town, as you  
can tell if you follow events from day to day. And I didn't know that the  
Botanical Gardens was a branch of the Congress until I showed up here.  
(Laughter.) It's just one more thing I'm not responsible for. I'm glad to  
be here. (Laughter.)

I also think that we should introduce a guest from another country  
who's here with us, the environmental minister from Australia, Ros Kelly.  
Would you stand up? We're glad to have you here. (Applause.)

Al Gore introduced Katie McGinty, and you were all good enough to  
clap. And I don't know if you could hear through the clapping that her  
parents are here, and what you may not know is that the real reason we  
appointed her is that she's one of 10 children, and we'd like to carry  
Pennsylvania in 1996. (Laughter.) We think that there's a significant  
likelihood now because of that.

I want to say a special word of thanks to the Vice President for two  
things. First of all, for the wonderful trip that he has just concluded,  
going to Poland to represent our country on the occasion of the 50th  
anniversary of the Warsaw uprising and the wonderful remarks he gave in New  
York on the eve of that departure and the way that he represented the  
United States in Poland. And, secondly, notwithstanding what he said in

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the introduction, which was true -- (laughter) -- one of the reasons I did ask him to join the ticket is that he knew more about the subject of the environment than I did. And I thought I had something to learn from him, and I have learned a great deal. And it has been an immensely rewarding experience, and one which I hope will benefit the United States in many ways over the course of the next four years. (Applause.) That's worth clapping for. I agree with that, Nancy, thank you.

It's a good thing to have this celebration in the springtime, a time when our spirits are renewed and we are reminded by nature of new beginnings and forgotten beauty. This has been an astonishingly beautiful spring in Washington, DC, and something for which I will always be grateful, my first springtime here that I see every morning as I go out and jog around in it and try to breathe in it, something that is a continuing challenge. (Laughter.)

A little more than a week ago, most Americans celebrated holy days of freedom and renewal. Today, we still nurture the faith that helps us to understand more clearly that we can do better. This is a time of new beginnings, a time when there is anguish and anxiety all around us, but we still must yearn once again to succeed in our common purposes, to reach our deepest goals.

For all of our differences, I think there is an overwhelming determination to change our course, to offer more opportunity, to assume more responsibility, to restore the larger American community, and to achieve things that are larger than ourselves and more lasting than the present moment. We seek to set our course by the star of age-old values, not short-term expedencies, to waste less in the present and provide more for the future, to leave a legacy that keeps faith with those who left the earth to us. That is the American spirit. It moves us not only in great gatherings, but also when we stand silently all alone in the presence only of nature and our Creator.

If there is one commitment that defines our people, it is our devotion to the rich and expansive land we have inherited. From the first Americans to the present day, our people have lived in awe of the power, the majesty, and the beauty of the forests, the rivers, and the streams of America.

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that love of the land which flows like a mighty current through this land  
 and through our character burst into service on the first Earth Day in  
 1970.

When I traveled the country last year, I saw and spoke of how much had  
 been accomplished by the environmental movement since then and how much  
 still remains to be done. For all that has been done to protect the air  
 and the water, we haven't halted the destruction of wetlands at home and  
 the rain forests abroad. For all that has been learned, we still struggle  
 to comprehend such dangers to our planet's delicate environment as the  
 threat of greenhouse gases and the dangerous thinking of the ozone layer.  
 We haven't done nearly enough to protect our poorest communities from the  
 hazard such as lead poisoning, which is believed to cause mental  
 retardation, learning disabilities and impaired growth.

Unless we act and act now, we face a future where our planet will be  
 home to 9 billion people within our lifetime, but its capacity to support  
 and sustain our lives will be very much diminished. Unless we act, we face  
 the extinction of untold numbers of species that might support our  
 livelihood and provide medication to save our very lives. Unless we act  
 now, we face a future in which the sun may scorch us, not warm us, where  
 the change of season may take on a dreadful new meaning, and where our  
 children's children will inherit a planet far less hospitable than the  
 world in which we came of age.

I have a faith that we will act, not from fear but from hope and  
 through vision. All across this country, there is a deep understanding,  
 rooted in our religious heritage and renewed in the spirit of this time,  
 that the bounty of nature is not ours to waste, it is a gift from God that  
 we hold in trust for future generations. Preserving our heritage,  
 enhancing it and passing it along is a great purpose worthy of a great  
 people. If we seize the opportunity and shoulder the responsibility, we  
 can enrich the future and ennoble our own lives.

Just as we yearn to come together as a people, we yearn to move beyond  
 the false choices that the last few years have imposed upon us. For too  
 long, we have been told that we have to choose between the economy and the  
 environment, between our jobs, between our obligations to our own people  
 and our responsibilities to the future and to the rest of the world,  
 between public action and private economy.

I'm here today in the hope that we can together take a different  
 course of action, to offer a new set of challenges to our people. Our  
 environmental program is based on three principles. First, we think you  
 can't have a healthy economy without a healthy environment. We need not  
 choose between breathing clean air and bringing home secure pay checks.

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e fact is, our environmental problems result not from robust growth but from reckless growth. The fact is that only a prosperous society can have the confidence and the means to protect its environment. And the fact is that healthy communities and environmentally sound products and services do best in today's economic competition. That's why our policies must protect our environment, promote economic growth and provide millions of new high-skill, high-wage jobs.

Second, we want to protect the environment at home and abroad. In an era of global economics, global epidemics and global environmental hazards, a central challenge of our time is to promote our national interests

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in the context of its connectedness with the rest of the world. We share our atmosphere, our planet, our destiny with all the people of this world, and the policies I outline today will protect all of us because that is the only way we can protect any of us.

And third, we must move beyond the antagonisms among business, government, and individual citizens. The policies I outline today are part of our effort to reinvent government, to make it your partner and not your overseer, to lead by example and not by bureaucratic fiat.

In the face of great challenges, we need a government that not only guards against the worst in us, but helps to bring out the best in us. I know we can do this because our administration includes the best team of environmental policymakers who have ever served the United States. The Vice President, Interior Secretary Babbitt, EPA Administrator Browner, and I hope that the EPA will soon, by the grace of Congress, be a cabinet-level department. And Energy Secretary O'Leary, Commerce Secretary Brown, Transportation Secretary Pena, the agriculture secretary, Mike Espy, our environmental policy director, Katie McGinty, and our science and technology adviser, Jack Gibbons -- all of them share an unshakable commitment to a healthy environment, a growing economy and a responsive government. Our economic plan will create new job opportunities and new business opportunities protecting our natural environment.

The reductions in the interest rates which we have seen already will free up tens of billions of dollars for responsible investment in this year alone. The jobs package I have asked the Congress to pass contains -- this has hardly been noticed -- but it actually contains green jobs, from waste water treatment, to energy efficiency, to the restoration of our national parks, to investments in new technologies designed to create the means by which we can solve the problems of the future and create more jobs for America.

Our long-term strategy -- invest more in pollution prevention, energy efficiency, in solar energy and renewable energy, in environmental restoration, in water treatment -- all of which can be found in the five-year budget that we have presented to the Congress. These investments will create tens of thousands of new jobs, and they will save tens of thousands more because when we save energy and resources, we will have more to invest in creating new jobs and providing better living standards.

Today every other advanced nation is more energy efficient than we do -- we are. That is one of the reasons why over the last couple of years, for example, the average German factory worker has come to make over 20 percent more than his American counterpart. The German workers, while having higher wages, also have more secure and better health care. That's

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cause that economy uses one-half the energy we do to produce the same amount of goods. We can do better, and we will.

I believe we can develop the know-how to out-conserve and out-compete anyone else on earth. All over the world, people are buying products that help them to protect their environment. There is a \$200 billion market today for environmental technology, and by the turn of the decade and the century, it will be \$300 billion.

Let me just share one example with you, something we all know and use, something some of us are still trying to learn how to replace -- light bulbs. Long-lasting, energy-saving light bulbs didn't even exist in 1985. Now American companies sell over \$500 million worth of these products, with sales expected to reach \$2 billion by 1995 and \$10 billion by the year 2000, creating thousands of new jobs. American scientists have taken the lead in developing these technologies, and it's time to help our companies make the lead in bringing our products and services to market.

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I've asked the Energy Department, the Commerce Department and the EPA to assess current environmental technologies and create a strategic plan to give our companies the trade developmental, promotional efforts and technical assistance they need to turn these advances into jobs here in America as well as to help promote a better environment. America can maintain our lead in the world economy by taking the lead to preserve the world's environment.

Last year, the nations of the world came together at the Earth Summit in Rio to try to find a way to protect the miraculous diversity of plant and animal life all across the planet. The biodiversity treaty which resulted had some flaws, and we all knew that. But instead of fixing them, the United States walked away from the treaty. That left us out of a treaty that is critically important not only to our future but to the future of the world, and not only because of what it will do to preserve species, but because of opportunities it offers for cutting edge companies whose research creates new medicines, new products and new jobs.

Again, just one research example makes the point. A tree that was thought to have no value, the Pacific yew, used to be bulldozed and burned. Now we know that that tree contains one of our most promising potential cures for ovarian cancer, breast cancer and other forms of cancer.

We cannot walk away from challenges like those presented by the biodiversity treaty. We must step up to them. Our administration has worked with business and environmental groups toward an agreement that protects both American interests and the world environment. And today I am proud to announce the United States' intention to sign the biodiversity treaty. (Applause.)

This is an example of what you can do by bringing business and environmentalists together instead of pitting them against each other. We can move forward to protect critical natural resources and critical technologies.

I'm also directing the State Department to move ahead with our talks with other countries, which have signed the convention, so that the United States can move as quickly as possible toward ratification. To learn more about where we stand in protecting all our biological resources here at home, I'm asking the Interior Department to create a National Biological Survey to help us protect endangered species and, just as importantly, to help the agricultural and biotechnical industries of our country identify new sources of food, fiber and medication. (Applause.)

We also must take the lead in addressing the challenge of global warming that could make our planet and its climate less hospitable and more

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ostile to human life. Today I reaffirm my personal, and announce our  
ation's commitment to reducing our emissions of greenhouse gases to their  
990 levels by the year 2000. (Applause.)

Now, I am instructing my administration to produce a cost-effective  
plan by August that can continue the trend of reduced emissions. This must  
be a clarion call, not for more bureaucracy or regulation or unnecessary  
costs

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ut instead for American ingenuity and creativity to produce the best and  
 ost energy-efficient technology.

After the Cold War, we face the challenge of helping Russia achieve a  
 healthy democracy, a healthy economy, and a healthy environment. Our  
 Russian aid package includes \$38 million to clean up pollution and promote  
 better uses of energy. As with the full range of our investments in  
 Russia, this is truly an investment not only in promoting our own values,  
 but in protecting our national security.

To protect the environment at home and abroad, I'm committed to a  
 government that leads by example, brings people together and brings out the  
 best in everyone. For too long, our government did more to inflame  
 environmental issues than to solve them. Different agencies pursued  
 conflicting policies. National leaders polarized people. And problems  
 wound up in the courts or in the streets instead of being solved.

We seek to bring a new spirit to these difficult issues. Three weeks  
 ago in Portland, Oregon, we brought together business people, timber  
 workers, and environmentalists from throughout the Northwest to discuss how  
 best to preserve jobs and to protect the old-growth forests and the species  
 which inhabit them. People sat down in a conference room, not a courtroom,  
 and in the words of Archbishop Thomas Murphy (sp) of Seattle, we tried to  
 find common ground for a common good.

At the close of that forest conference, I asked my cabinet and our  
 entire administration to begin work immediately to craft a balanced,  
 comprehensive, long-term policy, that is also comprehensible. Before I ask  
 our companies and our communities and our families to meet any challenge,  
 it seems to me we have to set that standard for the government. The  
 American people are entitled to know where the United States stands on this  
 issue and many other issues, and it is time to bring an end to the time  
 when issues like this wind up in court and there are five different  
 positions from the United States government itself. We can never solve  
 problems in that fashion. We can only undermine the security and stability  
 of people's lives.

And that's one reason I'm proud that yesterday the United States Army  
 announced its plan to clean up a large number of sights where we learned  
 recently that chemical weapons materials may be buried, in some places from  
 as long ago as World War I. Working with the EPA, the Army will clean up  
 this problem safely and in an environmentally sound manner.

This is a legacy of America's efforts to defend our people and the  
 community of free nations. Now we are taking steps to defend our people  
 and our environment and the environment of the world. In that same spirit,

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plan to sign an executive order requiring federal facilities that manufacture, process, or use toxic chemicals to comply with the federal right to know laws and publicly report what they are doing. (Applause.)

I might add that it is time that the United States government begins to live under the laws it makes for other people. With this executive order, I ask all federal facilities to set a voluntary goal of reducing their release of toxic pollutants by 50 percent by 1999. This will reduce toxic releases, control costs associated with cleanups, and promote clean technologies. And it will help make our government what it should be, a positive example for the rest of the country. (Applause.)

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Poor neighborhoods in our cities suffer most often from toxic pollution. Cleaning up the toxic waste will create new jobs in these neighborhoods for those people and make them safer places to live, to work, and to do business.

Today I am also signing an executive order that directs federal agencies to make preliminary changes in their purchasing policies -- to use fewer substances harmful to the ozone layer. Here, too, we must put our actions where our values are. Our government is a leading purchaser of goods and services, and it's time to stop not only the waste of taxpayers' money, but the waste of our natural resources. Today I am signing an executive order which commits the federal government to buy thousands more American-made vehicles using clean, domestic fuels such as natural gas, ethanol, methanol, and electric power. This will reduce our demand for foreign oil, reduce air pollution, promote promising technologies, promote American companies, create American jobs, and save American tax dollars.

To demonstrate my commitment to this issue, Energy Secretary O'Leary is creating a tax force led by the land commissioner of Texas, Gary Morrow (sp), who is here in the audience today, who has headed a successful effort in his own state. I hope we can do as well in America as they have done in Texas. (Applause.)

In that same spirit, I plan to sign an executive order committing every agency of the national government to do more than ever to buy and use recycled products. This will provide a market for new technologies, make better use of recycled materials, and encourage the creation of new products that can be offered to the government, to private companies, and to consumers. And again, it will create jobs through the recycling process. We must keep finding new ways to be a force for positive change.

For example, the federal government is the largest purchaser of computer equipment in the world, and computers are the fastest growing area of electricity use. That's why I am also signing an executive order today requiring the federal government to purchase energy-efficient computers. We're going to expand the market for a technology where America pioneered and still leads the world, and will save energy, saving the taxpayers \$40 million a year, and set an example for our country and for the world.

For as long as I live and work in the White House, I want Americans not only to see it not only as a symbol of clean government, but also a clean environment. That's why I'm announcing an energy and environmental audit of the White House. We're going to identify what it takes to make the White House a model for efficiency and waste reduction. It might mean fewer memos and less paper. (Laughter.) And then we're going to get the job done. I want to make the White House a model for other federal

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gencies, for state and local governments, for businesses, and for families in their homes. Before I ask you to do the best you can in your house, I ought to make sure I'm doing the best I can in my house. (Applause.)

I ask that all of us today reaffirm our willingness to assume responsibility for our common environment, and to do it willingly, hopefully, and joyously. We are challenged here today not so much to sacrifice as to celebrate and create. I've challenged Americans who are young in years or young in spirit to offer their time and their talent to serve their communities and their country. I've asked them to help in teaching our children, healing the sick, policing our streets. But equally important are efforts to protect our environment, from our largest cities to our smallest towns to our suburbs. Our national service plan will ask thousands of Americans to do their part, from leading recycling drives to preventing lead poisoning.

The challenge to shoulder responsibility and seize opportunity extends to each of us in businesses, communities and homes. In our own lives and our own way, each of us has something to offer to the work of cleaning up America's environment. And each of us surely has something very personal to gain.

On a colder day in the middle of winter just three months ago, a poet asked us to celebrate not only the marvelous diversity of our people, but the miraculous bounty of our land. Here on the pulse of this new day, Maya Angelou challenged us to look at the rock, the river, the tree, your country. Now it is a season of new hope and new beginnings, and as we look anew at our neighbors, our children, and our own communities, as well as the world around us, we must seize the possibilities inherent in this exhilarating moment, to face our challenges, to exercise our responsibilities, and to rejoice in them.

Thank you very much.

(Applause.)

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Statement for the Record by Kenneth D. Brody  
 President and Chairman  
 Export-Import Bank of the United States  
 Before the House Subcommittee on Environment and Natural  
 Resources  
 Committee on Merchant Marine and Fisheries

I am pleased to have this opportunity to express the views of the Export-Import Bank of the United States on H.R. 2112, the National Environmental Trade Development Act of 1993, and to discuss the steps the Eximbank and the rest of the administration have been taking to increase U.S. environmental exports by securing a strong share for U.S. manufacturers in this very important, growing world market. I compliment you for highlighting this important issue by introducing this legislation. Properly pursued, increasing these exports will result in more U.S. jobs here at home and improve the global environment. These goals represent what can happen when the government and the private sector work together, and I certainly feel that the Eximbank represents the foremost example of how this partnership is being put into practice on a daily basis.

The Role of Eximbank is Supporting Environmental Exports

At the Bank, we are well aware that this market could reach \$500 billion by the end of this decade, and we stand ready to continue our vital role of providing financing for these exports. I say "continue", because the Bank is no stranger to such exports. Eximbank has supported a wide variety of American environmental exports, ranging from a feasibility study for a water and sewage infrastructure project in Istanbul, Turkey; U.S. equipment, technology and project management services to improve water resources and infrastructure in rural areas of Venezuela, to a wide array of U.S. pollution control equipment and clean, energy efficient technologies in oil refineries, chemical plants, paper mills and mining/smeltering operations which serve to curtail air and water pollution and ease the demand on natural resources. With its programs of loans, guarantees, and insurance, as well as its special programs for small business such as the working capital guarantee, the Bank is playing an active role in helping to support environmental exports. But even so, with improved coordination within the Administration and further cooperation with the Congress, we feel that our role may be even more active. It is in this regard that I will comment on H.R. 2112.

Current Coordination within the Administration

As you are aware, President Clinton, in the speech he delivered on Earth Day, announced a government-wide effort to increase exports of U.S. made environmental technologies and to improve our competitiveness in the growing world market for environmentally sound products and services.

The Administration has established an Interagency Working Group on Environmental Exports in response to the President's Earth Day speech. The group includes such departments and agencies as Office of Strategic Trade Policy, National Oceanic and Atmospheric Administration, Department of Energy, Eximbank, Environmental Protection Agency, International Trade Administration, and the National Institute of Standards and Technology, and meets at least weekly to evaluate and coordinate intra-governmental efforts at trade promotion. This group has the expertise to identify global market needs and opportunities and provide a strategy so that the U.S. Government can maximize all of the resources at its disposal and thus help provide a competitive edge for U.S. companies in the rapidly growing environmental export market. The particular role of Exim will be to "level the financial playing field" in the export of environmental goods and services. Working with other agencies and seeking formal input from the private sector, the Bank will be able to evaluate the export financing needs of the industry and plan to meet those needs. We are paying special attention to the needs of small and medium-sized businesses, and we are also investigating whether our current programs and facilities are adequate to meet the needs of environmental exporters. Exim itself has established an Environmental Task Force to help the Bank meet the new obligations of its charter, passed in the Export Enhancement Act of 1992, which for the first time allow the Board of Directors the authority to deny a case on environmental grounds. The Task Force has an Environmental Working Group to develop options for programmatic changes in support of environmental exports.

The Interagency Group is aiming to have its first report fully prepared by September 30, 1993. The work of the Exim groups is ongoing.

The Trade Promotion Coordinating Committee (TPCC), which was given a statutory mandate last year in the Export Enhancement Act of 1992, has an Energy, Environment and Infrastructure Working Group which has the potential to act as a coordinating mechanism for environmental exports. Among the groups represented on the TPCC are Exim, the Agency for International Development, the Trade and Development Agency, Commerce, State, Department of Energy, and the Environmental Protection Agency. The Secretary of Commerce, Ronald H. Brown, is the head of the TPCC and I am pleased that he has asked me to serve as the Co-Chairman of the Deputies Group. Eximbank is committed to making the U.S. Government's export promotion activities function more efficiently.

Throughout this entire process, government personnel have solicited the opinion of the private sector on future government policy. The goal is to develop policies that will assist the private sector in meeting the challenges of a very competitive world market and establish procedures where government - private

sector dialogue becomes a standard method of operation. This way, misunderstandings can be kept to a minimum and the government can be kept apprised of new developments and the need for changes in policy.

H. R. 2112 appears to have the same overall goals that the Administration is currently addressing in the Interagency Working Group on Environmental Exports. We believe that the structure is already in place and this group needs time to formulate its proposals. Although no specific program decisions have been made, I fully expect this group to complete its report by the September 30th target date. Eximbank is fully prepared to contribute to the efforts related to increasing our environmental technology exports.

We also feel that the Environmental Trade Promotion Council, which would be established by H.R. 2112, would at least in part duplicate the efforts of the environmental working group of the TPCC. This could conflict with the wish of the Administration to eliminate duplicative advisory committees.

In conclusion, we are very encouraged by the interest shown by you, the co-sponsors of the bill, and the Members of the Subcommittee in introducing this legislation and holding hearings. We plan to be in close contact with you as we progress toward our joint goal of making the U.S. the world leader in the export of environmental technology.

Comments of the Agency for International Development  
for the Committee on Merchant Marine and Fisheries  
on H.R. 2112

The National Environmental Trade and Development Act of 1993

The Agency for International Development (A.I.D.) offers the following comments on the "National Environmental Trade Development Act of 1993."

The overall purpose of the proposed bill emphasizes the need for a coordinated government and private sector export strategy in the area of environmental technology with specific emphasis on marine biotechnology. This is an appropriate time to consider how we may build a partnership with the private sector in seeking to expand export opportunities for U.S. businesses.

The market for environmental goods and services will certainly grow as developing countries and those in transition to market-oriented economies begin to build and strengthen their environmental protection and conservation programs. According to the bill, the global market for environmental technology is expected to increase from \$270 billion to \$500 billion by the year 2000. While the potential opportunities are promising, the ability to move into new markets requires a focused strategic plan and a complementary set of government-wide export promotion programs.

The proposed legislation addresses the key issues of developing a strategic plan for the export promotion of environmental technology and also attempts to create a public-private sector partnership. However, export promotion programs alone do not guarantee an increase in exports in sectors where U.S. industry is competitive. Export opportunities are also influenced by a demand for goods and services by our trading partners which, in turn, depend on macroeconomic policies and other factors. We would like to note, as indicated in the 1993 "Annual Report of the United States Trade Representatives Office", U.S. export growth in 1991-1992 was concentrated in developing countries. An important element of A.I.D.'s bilateral foreign assistance program is to improve the foundation for economic growth in developing countries which will become significant trading partners in the future.

A.I.D. looks forward to working closely with other U.S. Government agencies in developing a strategic plan for exports of environmental technology through the Trade Promotion Coordinating Committee and other mechanisms.







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